

# FUNAI



## DVD / VIDEO CASSETTE RECORDER

# WL6D-M102

## OWNER'S MANUAL



### For Customer Use:

Carefully read the Model No. and Serial No. located at the back of the unit and enter the information below. Retain this information for future reference.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_



Introduction

Connections

Basic Setup /  
TV View Operation

Recording

Playback

Editing

Function Setup

VCR Functions

Others

# Introduction

## Precautions

**WARNING:** TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



**CAUTION**  
**RISK OF ELECTRIC SHOCK**  
**DO NOT OPEN**



### CAUTION:

TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The important note and rating are located on the rear or bottom of the cabinet.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The symbol for CLASS II (Double Insulation)

## Laser Safety

This unit is classified as a CLASS 1 LASER PRODUCT. This unit employs a laser. Only qualified service personnel should remove the cover or attempt to service this unit, due to the possibility of eye injury.

**CAUTION:** USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

**CAUTION:** CLASS 2M VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, DO NOT STARE INTO THE BEAM OR VIEW DIRECTLY WITH OPTICAL INSTRUMENTS.

**LOCATION:** INSIDE, NEAR THE DECK MECHANISM.

## Power Supply

The power supply is connected and the unit is live when the mains cable is plugged into a 220 - 240 V~, 50 Hz AC outlet. To operate the unit, press **[STANDBY-ON ⏻]**.

**WARNING:** **LIVE PARTS INSIDE.**  
**DO NOT REMOVE ANY SCREWS.**

## Caution

1. Do not attempt to open the cabinet. There are no user serviceable parts inside. Refer all servicing to qualified service personnel.
2. Slots and openings in the cabinet at the sides and underneath are provided for ventilation. To ensure reliable operation and to protect the unit from overheating, these openings must not be blocked or covered. Avoid installation in enclosed spaces such as bookcases unless suitable ventilation is provided.
3. Keep the unit away from radiators and other heat sources.
4. Avoid use near strong magnetic fields.
5. Do not push objects of any kind into the unit through the cabinet slots or openings as they could touch electrically live parts or short circuit parts resulting in a fire or electric shock.
6. To prevent fire or shock hazard, do not expose this apparatus to dripping or splashing, no objects filled with liquids, such as vases, should be placed on the apparatus.
7. Do not stand the unit vertically. Use the unit in a horizontal (flat) position only.
8. Before attempting to operate the unit, make sure that the timer recording mode is off.
9. This product is in Stand-by mode when turned off while the mains cable is connected.  
**The front panel display will not light up. This is a Power Saving Mode (ECO) for standby.**
10. Do not place any combustible objects on the device (candles, etc.).
11. Before moving the unit, be sure to remove any discs and unplug the mains cable from the AC outlet.
12. Disconnect the mains plug to switch off when the unit becomes faulty or not in use.
13. The mains plug shall remain readily operable.
14. Read the manual instructions to ensure correct and safe installation and interconnection of the unit in multimedia systems.
15. Keep the distances 20 cm around apparatus of ventilation openings.

### A NOTE ABOUT RECYCLING

This product's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.

This product consists of materials which can be recycled and reused if disassembled by a specialised company.

### Following information is only for EU-member states:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.



### Following information is only valid EU-member States:

#### Disposal of batteries and/or accumulators

The crossed out wheeled dust bin symbol indicates that batteries and/or accumulators must be collected and disposed of separately from household waste. If the battery or accumulator contains more than the specified values of lead (Pb), mercury (Hg), and/or cadmium (Cd) defined in the Battery Directive (2006/66/EC), then the chemical symbols for lead (Pb), mercury (Hg) and/or cadmium (Cd) will appear below the crossed out wheeled dust bin symbol. By participating in separate collection of batteries, you will help to assure the proper disposal of products and batteries and thus help to prevent potential negative consequences for the environment and human health. For more detailed information about the collection and recycling programmes available in your country, please contact your local city office or the shop where you purchased the product.



Pb, Hg, Cd

### Make your contribution to the environment!!!

- Exhausted batteries do not belong in the dustbin.
- You can dispose of them at a collection point for exhausted batteries or special waste.
- Contact your council for details.



Do not place the unit on the furniture that is capable of being tilted by a child and an adult leaning, pulling, standing or climbing on it. A falling unit can cause serious injury or even death.

Never use a gas duster on this unit.

The gas trapped inside of this unit may cause ignition and explosion.

## Installation Location

For safety and optimum performance of this unit:

- Install the unit in a horizontal and stable position.
- Keep the unit away from electronic equipment such as an amplifier, TV, etc. to prevent warping, damage, fire and malfunction.
- Do not place anything directly on top of the unit.
- Shield the unit from direct sunlight and keep away from sources of intense heat. Avoid dusty or humid locations. Avoid locations with insufficient ventilation for suitable heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.

## Avoid the Hazards of Electrical Shock and Fire

- Do not handle the mains cable with wet hands.
- Do not pull on the mains cable to disconnect it from the AC outlet. Grasp it by the plug.
- If, by accident, water is spilled on the unit, unplug the mains cable immediately and take the unit to an authorised service centre for servicing.

## Moisture Condensation Warning

Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place, after heating a cold room, or under conditions of high humidity. Do not use the unit for at least 2 hours to allow the inside to dry.

## About Copyright

Unauthorised copying, broadcasting, public performance and lending of discs are prohibited. This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

## Notice for the Progressive Scan Outputs

Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 480 or 576 progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 480p or 576p product, please contact our customer service centre.



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"Dolby® Digital Recording enables consumers to record high-quality video with stereo sound on recordable DVD discs. The technology, when utilised instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs created using Dolby Digital Recording will play back on all DVD-Video players."

Note: This is true when the players are compatible with actual recordable DVD discs.



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## Maintenance

### CLEANING THE UNIT

Use a soft cloth slightly moistened with a mild detergent solution. Do not use solutions containing alcohol, spirits, ammonia or abrasives.

### CLEANING DISCS

If a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the centre out. Do not wipe in a circular motion. Do not use solvents such as benzine, thinners, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analogue records.

### DISC HANDLING

Handle the discs so that fingerprints and dust do not adhere to the disc surfaces.

Always store the disc in its protective case when it is not in use.

### SERVICING

If the unit becomes inoperative, do not try to correct the problem by yourself. There are no user serviceable parts inside. Turn the unit off, unplug the mains cable, and consult your dealer or an authorised service centre.

### CLEANING THE DISC LENS

If the unit does not perform correctly even though you have referred to "Troubleshooting" and the relevant sections in the Owner's Manual, the laser optical pickup unit may be dirty. Consult your dealer or an authorised service centre for inspection and cleaning of the laser optical pickup unit.

### AUTO HEAD CLEANING

- Automatically cleans video heads as you insert or remove a cassette, so you can see a clear picture.
  - Playback picture may become blurred or interrupted while the TV programme reception is clear. Dirt accumulated on the video heads after a long period of use, or the usage of rental or worn tapes can cause this problem. If a streaky or snowy picture appears during playback, the video heads in the unit may need to be cleaned.
- 1 Please visit your local Audio / Video store and purchase a good quality VHS Video Head Cleaner.
  - 2 If a Video Head Cleaner does not solve the problem, please consult your dealer or an authorised service centre.

### Note

- Remember to read the instructions along with the video head cleaner before use.
- Clean video heads only when problems occur.



## Accessories Supplied

- Remote control with 2 R6 (1.5 V) batteries
- Owner's Manual(CD-ROM)
- Quick Start Guide

## Features

The following features are available with this unit.

### Recording

#### DVD

- **Recording up to 12 programmes**
- **One-touch timer recording:**  
(DVD) [➡ Page 25]  
(VCR) [➡ Page 62]

#### DVD

- **Automatic chapter mark setting:** [➡ Page 23]
- **Automatic Playlist making**  
(VR mode DVD-RW discs only)
- **Automatic finalising**  
(video mode DVD-RW/-R discs only): [➡ Page 34]
- **Automatic title menu making**  
(video mode DVD-RW/-R discs only): [➡ Page 34]

### Dubbing

#### DVD

- **DV dubbing:**  
(DVD) [➡ Pages 30-31]  
(VCR) [➡ Page 63]
- **Dubbing mode:** [➡ Page 32]

#### VCR

## Playback

#### DVD

- **Theatre surround sound:** [➡ Page 19]
- **Quick search:** [➡ Page 43]
- **CM skip:** [➡ Page 40]
- **Playback from Original or a Playlist**  
(VR mode DVD-RW discs only): [➡ Page 35]
- **Virtual Surround System:** [➡ Page 46]
- **Playing back data files recorded in a USB device:**  
[➡ Page 36]
- **Chasing playback during recording and simultaneous playback and recording:** [➡ Page 42]
- **Playing back MP3 / JPEG / DivX® / KODAK Picture CD files:** [➡ Pages 35-39]

#### VCR

- **Quick search:** [➡ Pages 63]

## Editing

#### DVD

- **Adding or deleting chapter marks manually:**  
[➡ Pages 49-50]
- **Creating titles to a Playlist**  
(VR mode DVD-RW discs only): [➡ Page 51]
- **Deleting titles:** [➡ Page 48]
- **Deleting a scene of a title**  
(VR mode DVD-RW discs only): [➡ Page 52]
- **Editing title name:** [➡ Page 49]
- **Combining titles**  
(VR mode DVD-RW discs only): [➡ Page 51]
- **Dividing titles**  
(VR mode DVD-RW discs only): [➡ Pages 50-51]
- **Protecting titles**  
(VR mode DVD-RW discs only): [➡ Page 50]
- **Adding or deleting chapter marks at once**  
(video mode DVD-RW discs only): [➡ Page 50]

## Compatibility

#### DVD

- **Playing back discs recorded in video mode in any regular DVD player:** [➡ Page 35]

## Others

#### DVD

- **Progressive scan system:** [➡ Pages 17,60]
- **HDMI (High-Definition Multimedia Interface):**  
[➡ Pages 18,61]

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# Guide to the Owner's Manual

## Symbols Used in the Owner's Manual

To show what recording mode or media type applies to each function, the following symbols appear at the beginning of each operating item.


Symbol	Description
	Available to DVD-videos
	Available to DVD-RW discs in video mode
	Available to DVD-RW discs in VR mode
	Available to DVD-R discs in video mode
	Available to audio CDs
	Available to CD-RW/-R discs and USB device with MP3 files
	Available to CD-RW/-R discs and USB device with JPEG files
	Available to DVD-RW/-R, CD-RW/-R discs and USB device with DivX® files (DivX® files in USB device are not guaranteed.)
	Available to VHS tapes Use only cassettes marked VHS (  )

Media for Recording / Playing				
Media Type		DVD-RW		DVD-R
Logo				
Format		Can be formatted in VR or video mode		Automatically formatted in video mode
Icon	Video Mode		VR Mode	
				
Maximum Record Time		480 min (12 cm) 144 min (8 cm)		 480 min (12 cm) 144 min (8 cm)
Recordable/Playable Versions		1x-6x Ver. 1.1/1.2 Ver. 1.1/1.2 CPRM compatible		1x-16x Ver. 2.0/2.1
Compatibility		Playable on most DVD players. Finalisation necessary. (Title menu will be created)	Playable only on VR mode compatible unit. Finalisation recommended.	Playable on most DVD players. Finalisation necessary. (Title menu will be created)
Available Features	Recording Features			
	Record AV Input	✓	✓	✓
	Reuse by Deleting the Current Contents	✓	✓	
	Record 16:9 Size Pictures	✓	✓	✓
	Record Copy-once Programmes		✓*	
	Create Chapters at Fixed Intervals (auto chapter)	✓	✓	✓
	Editing Features		Playlist	Original
	Scene Delete		✓	✓
	Edit Title Name	✓	✓	✓
	Create Chapters Wherever You Like (chapter mark)		✓	✓
	Divide a Title		✓	
	Combine Titles		✓	
	Delete a Title	✓	✓	✓
	Create a Playlist		✓	
	Protect a Title		✓	




✓: Available

Grey: Not available

\* CPRM compatible disc only.

DVD players with  are capable of playing DVD-RW recorded in VR mode.

Discs for Playing		
Disc Type	DVD-VIDEO	CD-DA
Logo		
Icon		

Files for Playing			
Type of title	MP3	JPEG	DivX®
Icon			
Media	CD-RW/-R USB device	CD-RW/-R USB device	CD-RW/-R DVD-RW/-R USB device (not guaranteed)

- **ABOUT DIVX VIDEO:** DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. This is an official DivX Certified® device that plays DivX video. Visit [divx.com](http://divx.com) for more information and software tools to convert your files into DivX videos.
- **ABOUT DIVX VIDEO-ON-DEMAND:** This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in your device setup menu. Go to [vod.divx.com](http://vod.divx.com) for more information on how to complete your registration.
- DivX Certified® to play DivX® video, including premium content.
- Media containing the DivX® files with the DivX® GMC (Global Motion Compensation) playback feature, which is DivX® supplemental function, cannot be played back on this unit.

## Unplayable Discs

The following discs will not play back on this unit.

- CD-ROM
  - Compact Disc-Interactive (CD-I)
- Video CD (VCD)
  - Super Video CD (SVCD)
- Video Single Disc (VSD)
  - DVD-ROM
- DVD-audio
  - Unfinalised disc
- DVD or CD contains Windows Media™ Audio files
- DVD-RW/-R recorded in non compatible recording format
- Blu-ray Disc
  - HD DVD

On the following disc, the sound may not be heard.

- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

## Colour Systems

This unit uses the PAL system. However, it is also possible to play back DVDs using other colour systems, such as NTSC.

## Region Codes

This unit has been designed to play DVD with region 2. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit. The number inside the globe refers to region of the world.

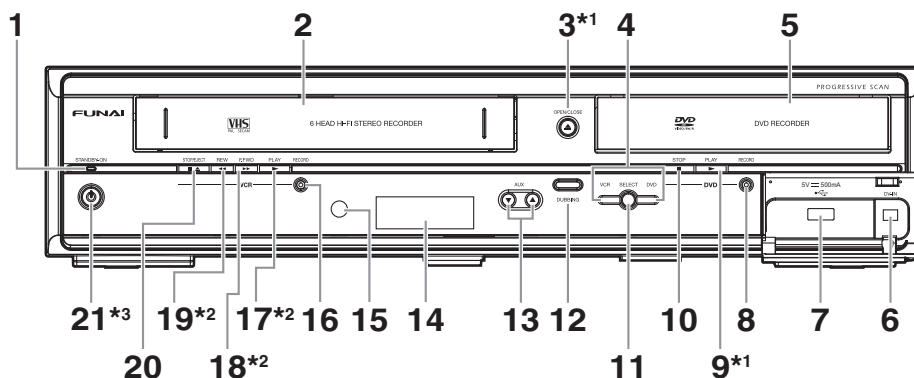


Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition the unit may not read the disc properly.

Verbatim	DVD-R 8x, DVD-RW 2x
JVC	DVD-RW 4x
Maxell	DVD-R 8x/16x

# Functional Overview

## Front Panel



(★1) You can also turn on the unit by pressing these buttons.

(★2) You can turn on the unit by pressing these buttons only when a videotape is in this unit.

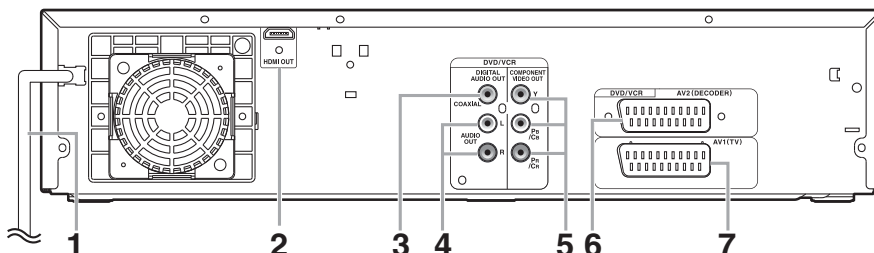
(★3) Press to turn on the unit, or to turn the unit into the standby mode. (To completely shut down the unit, you must unplug the AC power cord.)

- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 1 <b>STANDBY-ON</b> indicator        | 12 <b>DUBBING</b> button              |
| 2 <b>Cassette</b> compartment        | 13 <b>AUX</b> ▲ / ▼ buttons           |
| 3 <b>OPEN/CLOSE</b> ▲ button★1 (DVD) | 14 <b>Display</b> (“Off” in standby)  |
| 4 <b>VCR/DVD</b> indicators          | 15 <b>Infrared</b> sensor window      |
| 5 <b>Disc</b> tray                   | 16 <b>RECORD</b> ● button (VCR)       |
| 6 <b>DV-IN</b> jack (AV3)            | 17 <b>PLAY</b> ► button★2 (VCR)       |
| 7 <b>USB</b> input jack              | 18 <b>F.FWD</b> ►► button★2 (VCR)     |
| 8 <b>RECORD</b> ● button (DVD)       | 19 <b>REW</b> ◀◀ button★2 (VCR)       |
| 9 <b>PLAY</b> ► button★1 (DVD)       | 20 <b>STOP/EJECT</b> ■ ▲ button (VCR) |
| 10 <b>STOP</b> ■ button (DVD)        | 21 <b>STANDBY-ON</b> ⏻ button★3       |
| 11 <b>SELECT</b> button              |                                       |

### Button names described in the Owner's Manual

The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

## Rear Panel

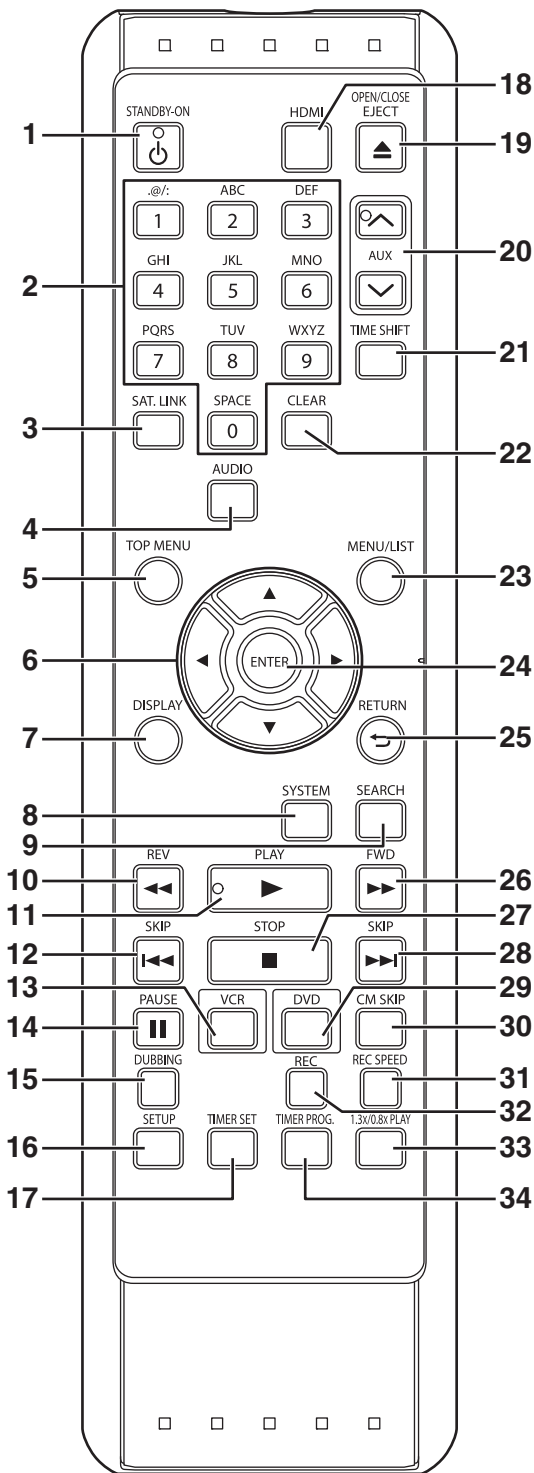


- |   |                                    |
|---|------------------------------------|
| 1 <b>Mains</b> cable                      | 5 <b>COMPONENT</b> VIDEO OUT jacks |
| 2 <b>HDMI</b> OUT jack                    | 6 <b>AV2 (DECODER)</b> socket      |
| 3 <b>DIGITAL</b> AUDIO OUT (COAXIAL) jack | 7 <b>AV1 (TV)</b> socket           |
| 4 <b>AUDIO</b> OUT (L/R) jacks            |                                    |

### Note

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- After turning off the unit, leave the mains cable plugged for about one minute. Otherwise it may cause data loss or the unit may not work properly.
- This unit has no tuner system so it cannot receive TV broadcasts without an external tuner or such devices.**





- 1 STANDBY-ON button
- 2 Number buttons
- 3 SAT.LINK button
- 4 AUDIO button
- 5 TOP MENU button (DVD)
- 6 Direction  $\uparrow$  /  $\downarrow$  /  $\leftarrow$  /  $\rightarrow$  buttons
- 7 DISPLAY button
- 8 SYSTEM button (VCR)
- 9 SEARCH button (VCR)
- 10 REV  $\ll$  button
- 11 PLAY  $\triangleright$  button
- 12 SKIP  $\lll$  button (DVD)
- 13 VCR button
- 14 PAUSE  $\parallel$  button
- 15 DUBBING button
- 16 SETUP button
- 17 TIMER SET button
- 18 HDMI button
- 19 OPEN/CLOSE EJECT  $\blacktriangle$  button
- 20 AUX  $\wedge$  /  $\vee$  buttons
- 21 TIME SHIFT button (DVD)
- 22 CLEAR button
- 23 MENU/LIST button (DVD)
- 24 ENTER button
- 25 RETURN button
- 26 FWD  $\gg$  button
- 27 STOP  $\blacksquare$  button
- 28 SKIP  $\ggg$  button (DVD)
- 29 DVD button
- 30 CM SKIP button (DVD)
- 31 REC SPEED button
- 32 REC button
- 33 1.3x/0.8x PLAY button (DVD)
- 34 TIMER PROG. button

## Button names described in the Owner's Manual

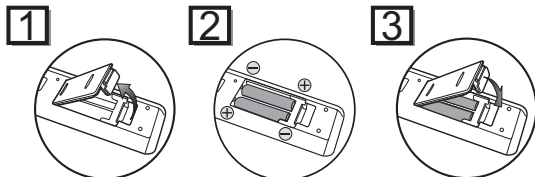
The instructions in this manual are described mainly with the operations using the remote control. Some operations can be carried out using the buttons on the front panel.

## Note

- If you turn off this unit, [OPEN/CLOSE EJECT  $\blacktriangle$ ] on the remote control is not available. Be sure to use [OPEN/CLOSE  $\blacktriangle$ ] or [STOP/EJECT  $\blacksquare$   $\blacktriangle$ ] on the unit.

## Installing Batteries in the Remote Control

Install 2 R6 (1.5 V) batteries (supplied) into the remote control, carefully match with the polarity indicated inside the battery compartment.

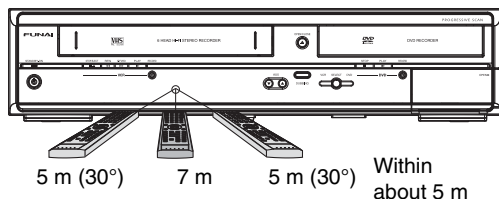


### Caution

- Incorrect use of batteries can result in hazards such as leakage and bursting.
- Do not mix new and old batteries together.
- Do not use different kinds of batteries together.
- Make sure that the plus (+) and minus (-) ends of each battery match the indications inside the battery compartment.
- Remove batteries if the equipment will not be used for a month or more.
- When disposing used batteries, please comply with governmental regulations or the public instructions for environmental protection that apply in your country or area.
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

## About the Remote Control

- Make sure there is no obstacle between the remote control and the remote control sensor on the unit.
- Use within the operating range and angle as shown.



- The maximum operable range as follows:

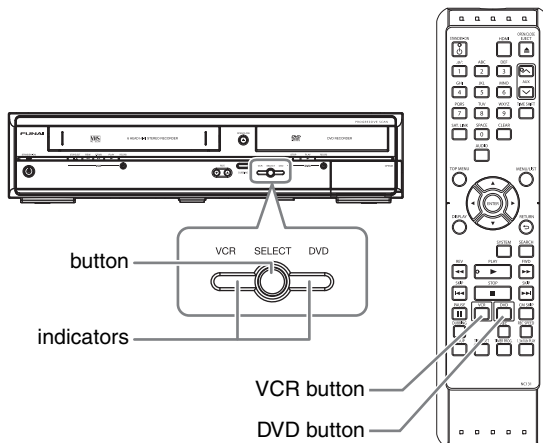
**Line of sight:** approximately 7 m

**Either side of centre:** approximately 5 m within 30 degrees

- Remote control operation may become unreliable if the remote control sensor of the unit is being exposed by the strong sunlight or fluorescent light.
- Remote controls for different devices can interfere with each other. Be careful when using remote controls for other equipment located close to the unit.
- Replace the batteries when the operating range of the remote control reduces.

## Switching DVD / VCR mode

You must select which component you want to operate first. Press **[DVD]** or **[VCR]** on the remote control or **[SELECT]** on the front panel.



### DVD

Press **[DVD]** on the remote control or **[SELECT]** on the front panel.  
(Verify that the DVD indicator is lit in green.)

### VCR

Press **[VCR]** on the remote control or **[SELECT]** on the front panel.  
(Verify that the VCR indicator is lit in orange.)

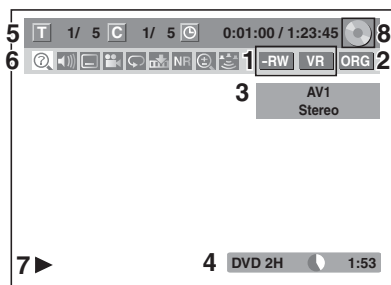
# Guide to On-Screen Displays

## DISPLAY Menu

### DVD

Press **[DVD]** first.

With a disc inserted into the unit, press **[DISPLAY]** to display the on-screen display. The on-screen display shows information about what is recorded on the disc.



This is an example screen for explanation. Displayed items vary depending on the actual mode.

- 1 Indicates a disc type and format mode.
- 2 Indicates a type of titles for VR mode DVD-RW disc.
- 3 Indicates a selected external input mode.
- 4 Indicates a media, recording speed and possible recording time left.
- 5 Indicates the current title number/total number of titles, the current chapter number/total number of chapters, and time lapse of the current title playback/total duration of the title.
- 6 Each icon means:

- : Search
- : Audio
- : Subtitle
- : Angle
- : Repeat
- : Marker
- : Noise Reduction
- : Zoom
- : Surround

- 7 Indicates an operation status.
- 8 Indicates the component in use.

- : DVD
- : USB device

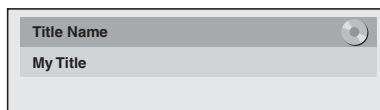
### Note

- For some descriptions on this manual, only one disc type is indicated as an example.

Press **[DISPLAY]** repeatedly while the display menu is displayed to display the following information.

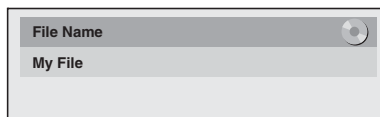
### <Title / File Name Information>

Title name information



(only when VR mode DVD-RW, unfinalised video mode DVD-RW/-R disc is in playback)

File name information

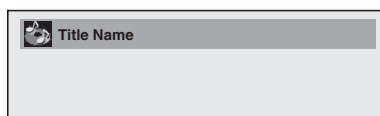


(only when MP3/JPEG/DivX® files is in playback)

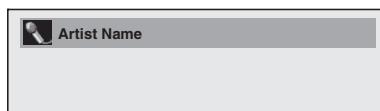
### <MP3 Tag Information>

(only when MP3 file is in playback)

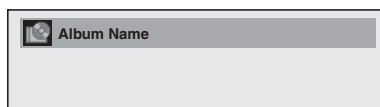
Title name information



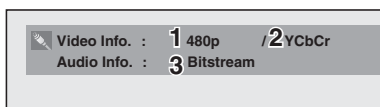
Artist name information



Album name information



### <HDMI Information>



(only for the images output through the HDMI output)

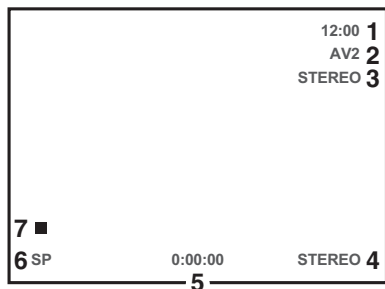
- 1 Indicates the resolution of the HDMI output image.
  - 2 Indicates the HDMI video format.
  - 3 Indicates the HDMI audio format.
- “- - -” will be displayed, when it does not have any information.

## VCR

While in the VCR mode, the on screen display of the VCR mode is displayed.

Press **[VCR]** first.

Press **[DISPLAY]** to display the on screen display.



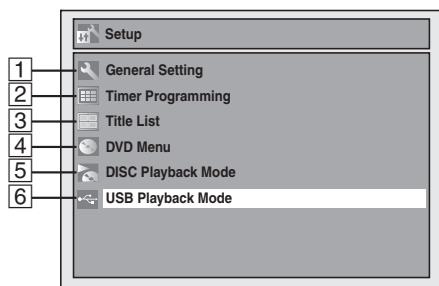
This is an example screen for explanation.

Displayed items are depending on the actual mode.

- 1 Current time**
- 2 Position number**
- 3 Audio status of the external equipment**
- 4 Audio status of the currently playing back video tape.**
- 5 Tape counter**
- 6 Recording or playing back speed**
- 7 Status of the current tape**

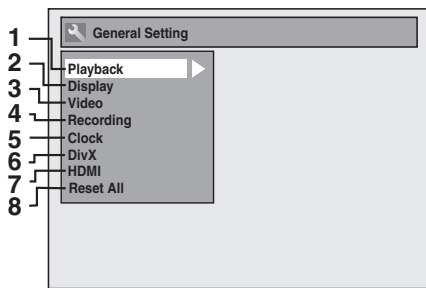
## Main Menu

Press **[SETUP]** to display the main menu. Then use **[▲ / ▼]** to select a menu and press **[ENTER]** to display the sub menu. Press **[RETURN]** to return to previous screen.



- **[5]** is displayed when a disc with CD-DA/MP3/JPEG/ KODAK Picture CD is inserted.
- **[6]** is displayed when a USB flash memory with MP3/JPEG is plugged.

### 1 General Setting



- 1 Playback:** [➡ Page 57]
- 2 Display:** [➡ Page 59]
- 3 Video:** [➡ Page 60]
- 4 Recording:** [➡ Pages 23-24, 30]
- 5 Clock:** [➡ Page 61]
- 6 DivX:** [➡ Pages 38, 61]
- 7 HDMI:** [➡ Page 61]
- 8 Reset All:** [➡ Page 61]

### 2 Timer Programming

To programme a timer recording. [➡ Page 26]

### 3 Title List

To call up the title list. [➡ Page 47]

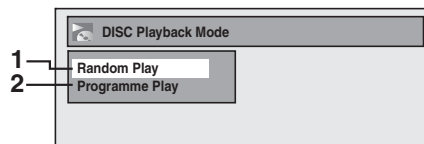
### 4 DVD Menu



- 1 Format (DVD-RW only):** [➡ Pages 23-24]
- 2 Finalise:** [➡ Page 33]
- 3 Disc Protect (VR mode DVD-RW disc only):** [➡ Page 33]
- 4 Delete All Playlists (VR mode DVD-RW disc only):** [➡ Page 51]

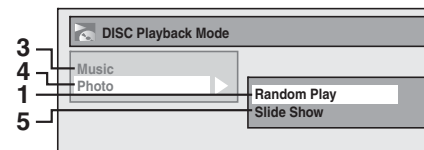
### 5 DISC Playback Mode

Audio CD



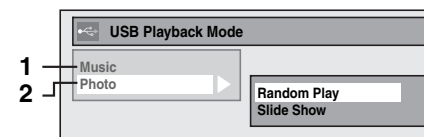
- 1 Random Play:** [➡ Page 44]
- 2 Programme Play:** [➡ Page 44]

CD-RW/-R with MP3 / JPEG / KODAK Picture CD files



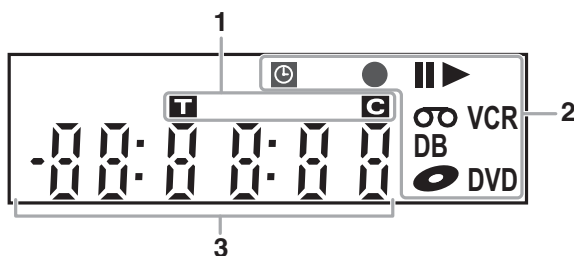
- 3 Music (MP3 files):** [➡ Page 44]
- 4 Photo (JPEG files):** [➡ Pages 44, 45]
- 5 Slide Show (JPEG / KODAK Picture CD files):** [➡ Page 45]

### 6 USB Playback Mode



- 1 Music (MP3 files):** [➡ Page 44]
- 2 Photo (JPEG files):** [➡ Pages 44, 45]

# Front Panel Display Guide



## 1 Title / Track and Chapter number

- T** : Title / track number  
**C** : Chapter number

## 2 Current status of the unit

- II** : Appears when playback is paused.  
 Appears during step by step playback.  
**▶** : Appears when playing back a disc.  
**II▶** : Appears during slow forward / reverse playback.  
**⏻** : Appears when the timer programming or One-touch Timer Recording (OTR) is set and operating.  
 Appears when the unit goes into the satellite link standby or recording mode.  
 Flashes when timer programming and satellite recording was not executed because of some error.  
**●** : Appears during recording.  
 Flashes when recording being paused.

**⏻** : Appears when a videotape is in this unit.

**●** : Appears when a disc is in this unit.

**DB** : Appears during dubbing.

**DVD** : Appears when this unit is in DVD output mode, or the timer-standby mode for DVD recording.

**VCR** : Appears when this unit is in VCR output mode, or the timer-standby mode for VCR recording.

## 3 Displays the following

- Playing back time
- Current title / chapter / track / file number
- Recording time / remaining time
- Clock
- One-touch Timer Recording (OTR) remaining time
- Selected HDMI video resolution

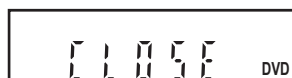
### Note

- Except when satellite recording is in standby, front panel display stays off while the power is off/timer-standby mode.
- This is a new Power Save (ECO) feature.**

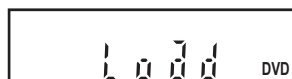
## Display Messages



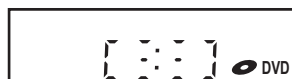
The disc tray is opening.



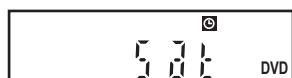
The disc tray is closing.



A disc is loading.



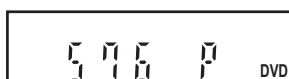
Data is being recorded on a disc.



Appears when the satellite link recording is in standby.



Appears when HDMI video resolution (480p) is selected.



Appears when HDMI video resolution (576p) is selected.



Appears when HDMI video resolution (720p) is selected.



Appears when HDMI video resolution (1080i) is selected.



Appears when HDMI video resolution (1080p) is selected.

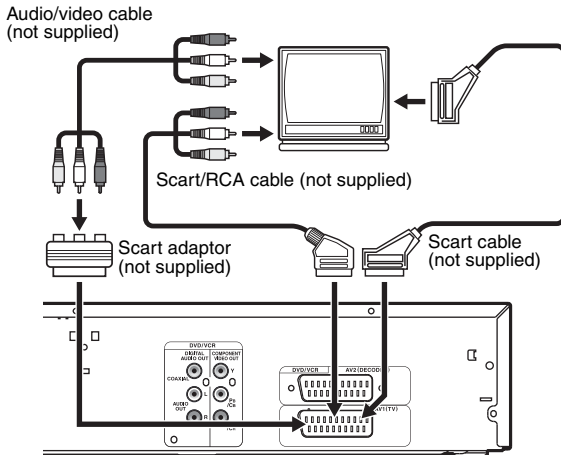


# Connections

## Connecting to a TV

Connect the unit to a TV after considering the capabilities of your existing equipment.

### Using the Scart socket



**Connect AV1 (TV) Scart socket of this unit to the Scart socket of your TV.**

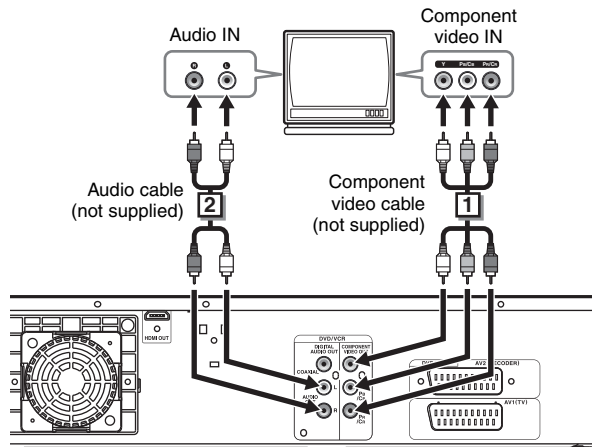
#### Note

- If your TV does not have a Scart socket, use a Scart/RCA cable to connect.
- Connect this unit directly to the TV. If the AV cables are connected to a VCR, pictures may be distorted due to the copy protection system.
- Analogue teletext can only be output in VCR mode through AV1 (TV) out. Use TV remote control to decode the analogue teletext.
- When changing the "Video Out" setting ("SCART (RGB)", "Component (Interlace)" or "Component (Progressive)"), connect to the corresponding jack on the TV. If the setting is changed, for example, to "Component (Interlace)" or "Component (Progressive)" while the scart cable is connected to the TV, a distorted video signal may be output.

## Using the COMPONENT VIDEO OUT Jacks and the AUDIO OUT (L/R) Jacks

If your TV has component video input jacks, use a component video cable (to connect the COMPONENT VIDEO OUT jacks) and an audio cable (to connect the AUDIO OUT (L/R) jacks). When using this type of connection, "Video Out" setting should be set to "Component (Progressive)" or "Component (Interlace)". Refer to "[2] Video Out (Default: SCART (RGB))" on page 60.

- Component connection provides the better quality picture.



**1 Connect the COMPONENT VIDEO OUT jacks of this unit to the component video input jacks of your TV.**

**2 Connect the AUDIO OUT (L/R) jacks of this unit to the analogue audio input jacks of your TV.**

- After you have made the connections, set the "Video Out" setting. (See page 60.)

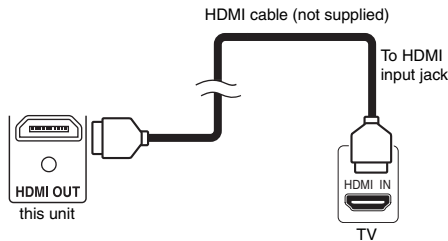
### Selecting Progressive Scan (576p/480p or Interlaced 576i/480i) Playback

- If your TV is compatible with progressive scanning (576p/480p), connect the TV to the COMPONENT VIDEO OUT jacks of this unit and set "Video Out" setting to "Component (Progressive)" in "Setup" menu. (See page 60.) Next, set your TV to the progressive scan mode.
- If your TV is not compatible with progressive scan, set "Video Out" setting to "Component (Interlace)".
- Use a commercially available adaptor if the video input jacks of your TVs or monitors are the BNC type.
- Only component and HDMI connections are compatible with the Progressive Scan.

## Using an HDMI Compatible Port

### [HDMI CONNECTION]

- HDMI outputs the video / audio signals without converting to analogue signals.
- No audio connections is required.
- Use the HDMI cable (commercially available) for connection.
- Connect the HDMI output jack of this unit to the HDMI input jack of TV.



### Selecting HDMI video resolution

Press **[HDMI]** to select the HDMI video resolution. The video resolution changes as follows every time **[HDMI]** is pressed.  
 576p (PAL) / 480p (NTSC) → 720p → 1080i → 1080p  
 (An HDMI video resolution that is not supported by the display device will be skipped.)

### Note

- Because HDMI is an evolving technology, it is possible that some devices with an HDMI input may not operate properly with this unit.
- When using an HDCP-incompatible display device, the image will not be viewed properly.
- Among the devices that support HDMI, some devices can control other devices via the HDMI connector; however, this unit cannot be controlled by another device via the HDMI connector.
- The audio signals from the HDMI connector (including the sampling frequency, the number of channels and bit length) may be limited by the device that is connected.
- Among the monitors that support HDMI, some do not support audio output (for example, projectors). In connections with device such as this unit, audio signals are not output from the HDMI output connector.
- When this unit's HDMI connector is connected to a DVI-D compatible monitor (HDCP compatible) with an HDMI-DVI conversion cable, the signals are output in digital RGB.
- If the connected equipment is not compatible with HDMI BITSTREAM, DTS sound will not be output.
- When the power failure occurs, or when you unplug the unit, some problems in the HDMI setting might occur. Please check and set the HDMI setting again.
- This unit does not support HDMI-CEC.

## Actual Output Modes by Media

Audio recording format of the disc		Dolby Digital / DTS / MPEG setting of this unit	Actual output
DVD-video	Dolby Digital	PCM	2 channel PCM
		Stream	Dolby Digital
	LPCM	PCM	2 channel PCM
		Stream	2 channel PCM
	DTS®	ON	DTS®
		OFF	-
	MPEG	PCM	2 channel PCM
		Stream	MPEG
DivX®	Dolby Digital	PCM	2 channel PCM
		Stream	Dolby Digital
	MP3	PCM	2 channel PCM
		Stream	2 channel PCM
	MP2	PCM	2 channel PCM
		Stream	MPEG

For audio CD and MP3 files, 2 channel PCM will be output regardless of the "Dolby Digital" setting.

If the connected device is not compatible with HDMI BITSTREAM, audio will be output as PCM even if you select "Stream" in "Dolby Digital" setting. (See page 58.)

### Copyright protection system

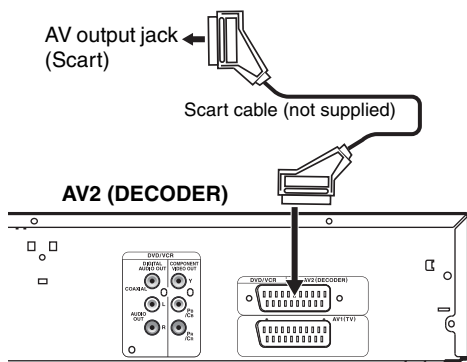
To play back the digital video images of a DVD via an HDMI connection, it is necessary that both the player and the display device (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device (or AV amplifier) for more information.

\* HDMI: High Definition Multimedia Interface

## Connecting to External Equipment

This unit has three input terminals. Press **[AUX ^ / ∨]** repeatedly to select AV1, AV2 or DV(AV3). Be sure that all the units are switched off before making connections.

### Recording from a DVD player, Satellite Box or other Audio-Video equipment with a Scart output socket (AV2)



#### Note

- When you record a TV programme from a Satellite Box / decoder, you must connect a Scart cable to AV2 (DECODER). (See page 29.)
- The signal from the external device will be output automatically when the TV is connected to AV1 and the external device is connected to AV2 using a Scart cable with its power on. (However, it will not be output when this unit's power is turned off.)

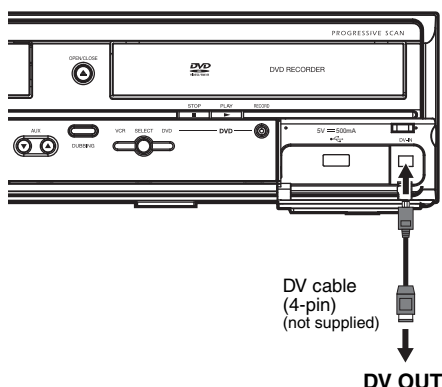
If you want to monitor this unit's signal, press **[DISPLAY]** or turn the external device off. (The signal from this unit can only be monitored during playback.)

If you want to monitor the signal from other input, press **[DISPLAY]**, then select the desired input channel using **[AUX ^ / ∨]**.

### Recording from a DV-camcorder (DV(AV3))

When connecting a DV-camcorder, use DV-IN jack of DV(AV3) (Front).

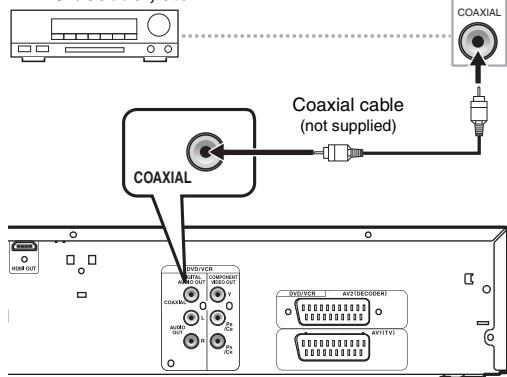
#### DV(AV3) (Front)



## Digital Audio for Better Sound Quality

Dolby Digital decoder,  
DTS decoder or  
MPEG decoder, etc.

Digital audio  
input jack



The connections illustrated above are optional for better sound

For clear digital sound quality, use the **DIGITAL AUDIO OUT (COAXIAL)** jack to connect your digital audio equipment.

If the audio format of the digital output does not match the capabilities of your receiver, the receiver will produce a strong, distorted sound or no sound at all.

### Connecting a Dolby Digital™ decoder, DTS decoder or MPEG decoder

- Connecting multi-channel Dolby Digital decoder allows you to enjoy the Multi-channel Dolby Digital surround system as well as DTS decoder, Multi-channel surround system.
- After connecting to a Dolby Digital decoder, set "Dolby Digital" to "Stream" in "Audio Out" menu. (See pages 57-58.)
- After connecting to a DTS decoder, set "DTS" to "ON" in "Audio Out" menu. (See pages 57-58.)
- After connecting to a MPEG decoder, set "MPEG" to "Stream" in "Audio Out" menu. (See pages 57-58.)




### Connecting to an MD deck or DAT deck

- The audio source recorded in Dolby Digital Multi-channel surround format cannot be recorded using an MD or DAT deck as a digital sound.
- If not connected to a Dolby Digital decoder, set "Dolby Digital" to "PCM" in "Audio Out" menu. Playing back a DVD using incorrect settings may generate noise distortion and damage speakers.
- Set "Dolby Digital" and "MPEG" to "PCM" and set "DTS" to "OFF" in "Audio Out" menu for connecting to an MD or DAT deck.
- You can use AUDIO OUT (L/R) jacks for the connection of your audio system.

# Basic Setup / TV View Operation

## Initial Setting

When you turn on this unit for the first time, you need to follow these steps.

- 1 Press [STANDBY-ON ].
- 2 Turn the TV on. Select the input to which the unit is connected.  
"Initial Setting" will automatically appear.
- 3 Select your desired language for the OSD using [ / ]. Then press [ENTER] to go to the next step.




- 4 After finishing language setting, proceed to "Clock" on page 61.

### Note







- After "Initial Setting", if you need to unplug the mains cable, make sure to turn off the power first and leave it in standby mode for at least 1 minute before attempting to unplug. Otherwise, it may cause data loss.

If you want to set each item of "Initial Setting" again, you can set them at "General Setting".

- Refer to "[] OSD Language (Default: French)" on page 59.
- Refer to "Clock" on page 61.

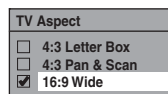
## Selecting the TV Aspect Ratio

Use this feature to adjust the aspect ratio of the video source which is different from your TV's ratio to fit your TV monitor without distorting the picture.

- 1 In stop mode, press [SETUP]. Select "General Setting" using [ / , then press [ENTER].
- 2 Select "Video" using [ / , then press [ENTER].
- 3 Select "TV Aspect" using [ / , then press [ENTER].



- 4 Select the desired option using [ / , then press [ENTER].



- 5 Press [SETUP] to exit.

### Note

If you have a standard TV:

- Select "4:3 Letter Box" for a full width picture with black bars at the top and bottom.
- Select "4:3 Pan & Scan" for a full height picture with both sides trimmed.

If you have a wide screen TV:

- Select "16:9 Wide".

# Recording

## Restrictions on Recording

You cannot record copy-protected video using this unit. Copy-protected video includes DVD-videos and some satellite broadcasts.

If copy-protected material is detected, recording will pause or stop automatically and an error message appears on the screen.

You can only record "Copy-once only" video using a DVD-RW disc in VR mode with Content Protection for Recordable Media (CPRM).





When recording an external input, you can display copy control information on the screen.

CPRM is a scrambling copy protection system for the protection of "copy-once" broadcast programmes.

This unit is CPRM compatible, which means that you can record copy-once broadcast programmes, but you cannot then make a copy of those recordings. CPRM recordings can only be played back on DVD players that are specifically compatible with CPRM.

## Information on Copy Control

Some satellite broadcasts include copy-protected information. If you want to record them, refer to the following.

Media type / format	Copy-free	Copy-once	Copy-prohibited
 ver. 1.1 / ver. 1.2	☆	—	—
ver. 1.1 / ver. 1.2 CPRM compatible	☆	☆	—
 ver. 1.1 / ver. 1.2	☆	—	—
ver. 1.1 / ver. 1.2 CPRM compatible	☆	—	—
 ver. 2.0 / ver. 2.1	☆	—	—
	☆	☆	☆

☆ : Recordable  
— : Not recordable

### Note

- This unit cannot record on CD-RW/-R discs.
- Discs recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the recorder's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format, it may not be played back or dubbed because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Discs recorded in video mode on this unit cannot record additional information using other DVD recorders.
- Since recording is performed using the Variable Bit Rate (VBR) method, the actual remaining time for recording may be a little shorter than the remaining time displayed on the OSD, depending on the picture you are recording.

## Information on DVD Recording

### Type of Discs

This unit can record on DVD-RW/-R discs.

DVD-RW discs allow you to record programmes repeatedly, and the recorded contents can be erased.

There are 2 recording formats: VR mode and video mode. VR and video modes are available for DVD-RW discs while as only video mode is available for DVD-R discs.

Video mode is the same recording format as used on the pre-recorded DVD-videos you purchase in local shops. You can play back the discs recorded in this format in most of the DVD players. You will need to finalise such discs (see page 33) before playing them back in other DVD players. Unless finalised, you can record additional materials or edit discs recorded in video mode with this unit. VR (Video Recording) mode is a basic recording format for DVD-RW discs.

VR mode offers advanced editing, and you can record and edit material repeatedly, however it is playable only on VR mode compatible unit. Finalisation is recommended before playing them back in other unit.

### Recording Speed

You can select a recording speed from 5 options.

The recording time will vary depending on the recording speed you select as follows.

Recording speed	Recording time		Video / Sound Quality
	DVD 12 cm	DVD 8 cm	
1H	60 min	18 min	☆☆☆☆☆
2H	120 min	36 min	☆☆☆☆
4H	240 min	72 min	☆☆☆
6H	360 min	108 min	☆☆
8H	480 min	144 min	☆

- This table is intended for a standard new single-sided 12 cm / 8 cm disc. The recording times are estimates and actual recording time may differ.
- The audio and video quality becomes poorer as the recording time gets longer.

## Making Discs Playable in Other DVD Players (Finalise)

After recording, you must finalise the disc to play it back in other players. (See page 33.)  
You cannot finalise discs in other DVD recorders.

Disc Type	DVD-R	DVD-RW	
		Video Mode	VR Mode
After finalising			
Automatic Title menu making	✓	✓	
Undo finalising (See page 33.)		✓	✓
Additional recording or editing (See page 33.)		✓ (undo finalise)	✓ (undo finalise)

✓: Available

Grey: Not available

## Maximum Recordable Numbers of Title / Chapters

### VR mode DVD:

- 99 titles per each Playlist and Original
- 999 chapters per each Playlist and Original

### Video mode DVD:

- 99 titles per disc
- 99 chapters per title



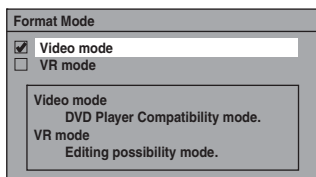
## Formatting a Disc

### Choosing the Recording Format of a Blank DVD-RW Disc



When inserting a brand-new DVD-RW disc, the unit automatically starts to initialise the disc. DVD-RW disc will be formatted either video or VR mode according to the recording format mode setting of the unit. Before inserting a brand-new DVD-RW disc, you need to set the recording format to the desired mode. You can also manually format a DVD-RW disc once it has been used.

- 1 In stop mode, press [SETUP].
- 2 Select "DVD Menu" using [▲ / ▼], then press [ENTER].
- 3 Select "Format" using [▲ / ▼], then press [ENTER].
- 4 Select "Format Mode" using [▲ / ▼], then press [ENTER].
- 5 Select "Video mode" or "VR mode" using [▲ / ▼], then press [ENTER].



- 6 Press [SETUP] to exit.
- 7 Insert a blank disc.  
Formatting will start.
- 8 Formatting is complete.  
"100%" is indicated.

#### Note

- The recording format setting is effective only for DVD-RW discs. You cannot change the recording format for a DVD-R disc.
- You cannot mix two formats on one DVD-RW disc.
- If you insert a disc that has been formatted before, the recording format is not changed if you select another format in the "Setup" menu only. To reformat a disc (change disc format type), refer to "Reformatting a Disc Manually" on page 23.

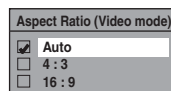
### Setting Aspect Ratio for Video Mode Recording



You can set aspect ratio for video mode recording.

- 1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER].
- 2 Select "Recording" using [▲ / ▼], then press [ENTER].
- 3 Select "Aspect Ratio (Video mode)" using [▲ / ▼], then press [ENTER].

- 4 Select your desired setting using [▲ / ▼], then press [ENTER].



Auto: It will be recorded with whichever the ratio that the programme you started to record is broadcasted with.

4:3 : Recorded with the aspect ratio of 4:3.

16:9 : Recorded with the aspect ratio of 16:9.

- 5 Press [SETUP] to exit.

#### Note

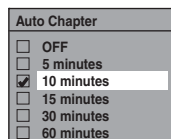
- For VR mode DVD-RW disc, the image will be recorded in whichever the ratio that the programme you record is broadcasted with, regardless of the "Aspect Ratio (Video mode)" setting.

### Setting Auto Chapter



The unit inserts a chapter mark periodically (every 10 minutes by default) during recording. Using the Auto Chapter menu, you can set this function off or change the time period.

- 1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER].
- 2 Select "Recording" using [▲ / ▼], then press [ENTER].
- 3 Select "Auto Chapter" using [▲ / ▼], then press [ENTER].
- 4 If you want to set "Auto Chapter" off, select "OFF" using [▲ / ▼], then press [ENTER].



If you want to change the time period for "Auto Chapter", select the required time period using [▲ / ▼], then press [ENTER].

- 5 Press [SETUP] to exit.

#### Note

- The interval for auto chapter may be up to 2 minutes different from the time option you set.
- While recording, no more chapter mark will be added after coming up to the maximum chapter mark number.

### Reformatting a Disc Manually



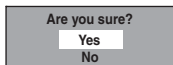
If you use a DVD-RW disc, you can format the disc by performing "Format". You can format DVD-RW disc for either video mode recording or VR mode recording.

#### Note

- When you reformat the disc, the contents of the disc are erased.
- Make sure that the recording format is set to the desired mode. (Refer steps 1 to 6 in "Choosing the Recording Format of a Blank DVD-RW Disc" on page 23.)

Insert a recordable disc.

- 1 In stop mode, press [SETUP].
- 2 Select “DVD Menu” using [▲ / ▼], then press [ENTER].
- 3 Select “Format” using [▲ / ▼], then press [ENTER].
- 4 Select “Start” using [▲ / ▼], then press [ENTER].  
A pop up window will appear and prompt you to confirm.
- 5 Select “Yes” using [▲ / ▼], then press [ENTER].  
e.g.) VR mode DVD-RW



Formatting will start.

If you want to cancel formatting, select “No”.

## 6 Formatting is complete.

### Note

- It is not possible to use a disc formatted with another DVD recorder. The disc needs to be reformatted with this unit. But this unit may not be able to reformat some discs that are not previously formatted by this unit (e.g. DVD disc formatted by PC or another recorder).

## Selecting the Audio Mode

You can set the external input audio type for recording.

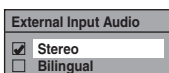
You can switch between modes by pressing [AUDIO]. Each mode is indicated on the TV.

### Setting External Input Audio



When the external input audio is a bilingual broadcast, you can choose “Stereo” or “Bilingual” to record on a DVD. This setting is only for recording external input (AV1/AV2).

- 1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER].
- 2 Select “Recording” using [▲ / ▼], then press [ENTER].
- 3 Select “External Input Audio” using [▲ / ▼], then press [ENTER].
- 4 Select “Stereo” or “Bilingual” using [▲ / ▼], then press [ENTER].



## 5 Press [SETUP] to exit.

### Note

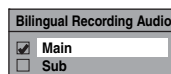
- If you select “Stereo”:  
The audio will be recorded as “stereo audio”.
- If you select “Bilingual”:  
The audio will be recorded as “bilingual audio”. (See “Setting Bilingual Recording Audio” on page 24 for more detail.)

## Setting Bilingual Recording Audio



You can select either “Main” or “Sub” audio to record a bilingual broadcast in video mode when the external input audio is a bilingual broadcast.

- 1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER].
- 2 Select “Recording” using [▲ / ▼], then press [ENTER].
- 3 Select “Bilingual Recording Audio” using [▲ / ▼], then press [ENTER].
- 4 Select “Main” or “Sub” using [▲ / ▼], then press [ENTER].



## 5 Press [SETUP] to exit.

### Note

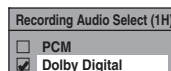
- If you want to record onto a VR mode disc, both “Main” and “Sub” will be recorded regardless of your setting here. And when you play back, you can choose either audio format or a combination of both as your playback audio.

## Recording Audio Select (1H)



You can enjoy high quality sound recording. This function works only when the recording speed is set at 1H.

- 1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER].
- 2 Select “Recording” using [▲ / ▼], then press [ENTER].
- 3 Select “Recording Audio Select (1H)” using [▲ / ▼], then press [ENTER].
- 4 Select “PCM” or “Dolby Digital” using [▲ / ▼], then press [ENTER].



PCM: Records PCM audio for the best quality sound.

Dolby Digital: Records Dolby Digital audio for good quality sound.

## 5 Press [SETUP] to exit.


### Note

- “PCM” stands for Pulse Code Modulation. It changes analogue sound to digital sound without compressing audio data.
- When the recording speed is set at other than 1H, the unit records “Dolby Digital” audio automatically even if you selected “PCM”.


# Basic Recording and One-touch Timer Recording (OTR)

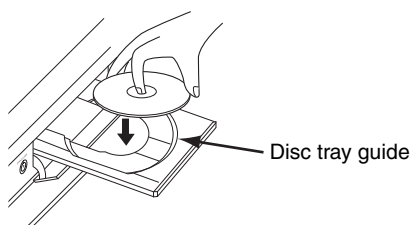





Follow the steps below to record an external input. This unit has no tuner system so it cannot receive TV broadcasts without an external tuner or such devices. (See page 62 for VCR recording.)

- 1 Press [STANDBY-ON ] to turn on the unit.**  
Turn on the TV and be sure to select the input to which the unit is connected.

Press [DVD].

- 2 Press [OPEN/CLOSE EJECT ] to open the disc tray.**
- 3 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.**





- 4 Press [OPEN/CLOSE EJECT ] to close the disc tray.**
- 5 Select the recording speed using [REC SPEED].** (See page 21.)
- 6 Select the desired channel to record using [AUX  / ] or [the Number buttons].**

## 7 Basic Recording:

Press [REC] to start recording.

The "●" mark will be displayed on the TV screen briefly.

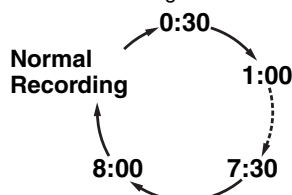
To pause the recording, press [PAUSE ]. Press [PAUSE ] or [REC] again to restart the recording.


## One-touch Timer Recording (OTR):

This is a simple way to set the recording time in blocks of 30 minutes. Check that the disc you are recording onto has enough space remaining for the time you set. (See page 62 for VCR recording.)

Press [REC] repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen.

One-touch Timer Recording will start.




- When the unit reaches the specified time, it will be turned off automatically.
- To change the recording length during One-touch Timer Recording, press [REC] repeatedly until the desired length appears.
- To cancel One-touch Timer Recording within the specified time, press [STOP ].

## 8 Press [STOP ] to stop the recording.

This operation may take a few moments to complete.

### Note

- You can change the channel while in the REC pause mode.
- Recording continues until the disc is full or you stop the recording.
- If the clock is not set, the date and time of title names will be 01/01/14 and 00:00.
- You cannot change the recording speed in the REC or REC pause mode.
- Even if the external input you are recording is in the SECAM system, this unit automatically converts it to the PAL system when recording.
- Up to 99 titles can be recorded on the DVD-RW/-R discs.
- You can play back a title on one component while making a recording on the other component. To do so, simply select the component (DVD or VCR) you want to use for the playback by pressing [DVD] or [VCR] during DVD / VCR recording. And then follow the normal playback procedure.
- NTSC recording is prohibited in this unit.
- The remaining recording time will appear on the TV screen during One-touch Timer Recording. Press [DISPLAY] to see it on the TV screen.
- The remaining recording time will be displayed on the front panel display during One-touch Timer Recording.
- Unlike the timer recording, you can perform the following operations during One-touch Timer Recording.
  - Turn off the power. (One-touch timer recording will be cancelled.)
  - Use [REC] or [STOP ] on the remote control.
- You cannot use the pause function during One-touch Timer Recording.
- The unit will be turned off automatically under the following conditions.
  - No space remains on the disc.
  - If a power failure occurs.
- If DVD One-touch Timer Recording is completed during VCR playback or recording, the DVD will be in stop mode and the VCR keeps the current mode.
- When One-touch Timer Recording is finished and the power is turned off, the unit will switch to the timer-standby mode automatically if a timer recording has been programmed. Press [TIMER SET] to cancel the timer-standby mode to use the unit continuously.

## Timer Recording



You can set the unit to record up to 12 programmes, up to a month in advance. Daily or weekly programme recordings are also available.

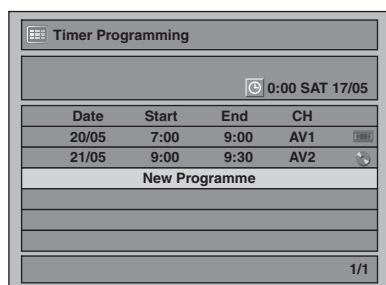
- Be sure to set the clock before entering a timer programming.

**Insert a recordable disc or a tape with a record tab.**

**1** In stop mode, press [TIMER PROG.].

"Timer Programming" list will appear.

**2** Select "New Programme" using [▲ / ▼], then press [ENTER].

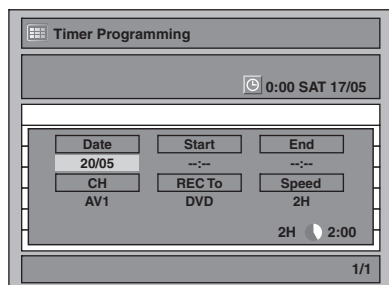
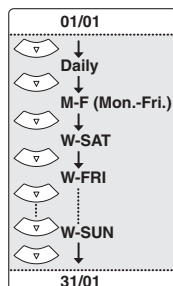


- If there are 6 programmes or more, use [SKIP] (◀◀ / ▶▶) to turn the page.

**3** Enter the date using [▲ / ▼], then press [▶].

Each time you press [▼] at the current date, the timer recording date will change as follows.

e.g., 1st January



**4** Enter the time to start and to end using [▲ / ▼], then press [▶].

**5** Select the external input (AV1/AV2) using [▲ / ▼], then press [▶].

**6** Select the recording media ("DVD" or "VCR") using [▲ / ▼], then press [▶].

**7** Select the recording speed using [▲ / ▼], then press [▶].

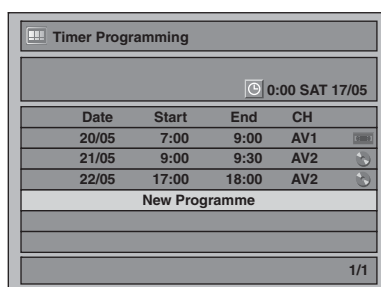
Refer to "Recording Speed" on page 21 for DVD or page 62 for VCR.

**8** Press [ENTER] when all information required is entered.

Your programme setting is stored.

- To set another programme, repeat steps 2 to 8.
- To exit, press [TIMER PROG.].
- When 2 or more programmes are overlapped, "Timer programme overlapped" appears, and the overlapped programme will be displayed in blue. To correct the timer programme, refer to "Checking, Cancelling or Correcting the Timer Programming Information" on page 27.

**9** Press [TIMER SET] to set a timer programming.



Front panel display stays off while the unit is in the standby mode.

## Note

- If you have not set the clock, the clock setting window will appear instead of the Timer Programming list. Continue from “Clock” on page 61 before programming the timer.
- Press [▲ / ▼] to move the cursor in “Timer Programming” list.
- If a basic recording or One-touch Timer Recording is in progress on one component (e.g. VCR) and the timer recording set for the other component (e.g. DVD) is about to begin, the unit automatically switches to the programmed channel for timer recording 2 minutes before the programmed starting time, and the recording in progress (for VCR) will be cancelled UNLESS their recording channels are the same. If their recording channels are the same, the timer recording will start without cancelling the recording currently in progress. In this case, the recording of the same channel will be made on both DVD and VCR.
- Cancel the timer-standby mode by pressing [TIMER SET] to use the component currently in timer-standby mode. When finished operating, press [TIMER SET] to resume the timer-standby mode.
- In the timer-standby mode, you can turn on the power and use the component (VCR or DVD) which is not currently timer-programmed.

## Checking, Cancelling or Correcting the Timer Programming Information

- 1 Press [TIMER SET] to cancel the timer-standby mode.
- 2 Press [TIMER PROG.].  
“Timer Programming” list will appear.
- 3 **A) To delete the timer programme:**
  - 1) Select the programme you want to delete using [▲ / ▼], then press [ENTER].
  - 2) Select “Delete” using [▲ / ▼], then press [ENTER]. Confirmation window will appear.
  - 3) Select “Yes” using [▲ / ▼], then press [ENTER].**B) To correct the timer programme:**
  - 1) Select the programme you want to correct using [▲ / ▼], then press [ENTER].
  - 2) Select “Programme Change” using [▲ / ▼], then press [ENTER].
  - 3) Correct the timer programme by using [▲ / ▼ / ◀ / ▶], then press [ENTER].
- 4 Press [TIMER PROG.] to exit.
- 5 Press [TIMER SET] to return to the timer-standby mode.

To check the timer programming in progress

Press [TIMER PROG.].

## Note

- If a timer recording is proceeding, that programme is highlighted in red. In such a case, you cannot select any other programmes.
- When you check the timer programming in progress by pressing [TIMER PROG.] during operations of the component (DVD or VCR) which is not currently used for the timer recording, the programme will not be highlighted. In this case, you cannot select other programmings.

## Stop the Timer Recording in Progress

On the front panel:

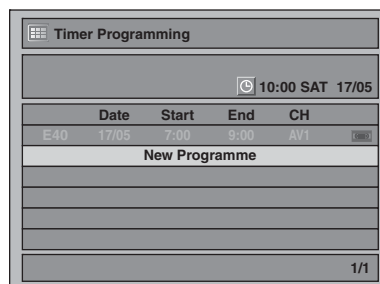
Press [STOP ■].

On the remote control:

- 1 Press [STOP ■].
- 2 Select “Yes” using [▲ / ▼], then press [ENTER].

## If the Timer Programming did not Complete Correctly

The error number appears on “Timer Programming” list.



The error programme will be displayed in grey with an error number.

## The error numbers indicate:

E1–E22, E37–E39	Recording error
E23–E24	Unrecordable disc
E25/E51	<ul style="list-style-type: none"> <li>Copy prohibited programme</li> <li>Cannot record because of the NTSC / PAL-60 signal is received.</li> </ul>
E26–E28	Copy prohibited programme
E29	Disc protected
E30	Disc full
E31	Already recorded 99 titles (video mode)
E32	Already recorded 99 titles (VR mode)
E33	Already recorded 999 chapters
E34	No space for Control Information
E35	PCA (Power Calibration Area) full
E36	Already finalised video format disc
E40	<ul style="list-style-type: none"> <li>There are some unrecorded parts due to the overlapped timer programmes.</li> <li>Recording did not start at the start time.</li> </ul>
E41	Power failure
E42	No disc
E45	Copy prohibited programme

- Timer programme with an error number will be cleared once the entry screen for the programme is displayed.

## Notes for the Timer Recording

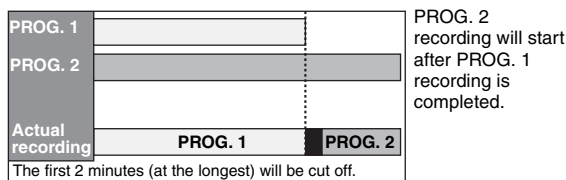
- If there is a power failure or the unit is unplugged for more than 30 seconds, the clock setting and all timer settings will be lost.
- If a disc is not inserted or if a inserted disc is not recordable (finalised DVD-RW/-R, a fully recorded disc, etc.), the **DVD** on the front panel display will flash and the timer recording will not occur. Insert a recordable disc.
- If there is no tape or a tape with a record tab is not in the cassette compartment, the **VCR** on the front panel display will flash and the timer recording cannot be performed. Please insert a recordable tape.
- After all timer recordings have completed, if you want to play back or eject the recorded disc, press **[TIMER SET]**, and then press **[PLAY ►]** or **[OPEN/CLOSE EJECT ▲]**.
- The timer recording cannot be performed in DVD and VCR at the same time. If you set two programmings with the same channel and time both in DVD and VCR, the programming that has priority will be recorded.
- You cannot make any DVD operation during DVD timer recording.
- You cannot make any VCR operation during VCR timer recording.
- Timer recording whose recording time exceeds 12 hours cannot be made.
- When 2 or more programmes are overlapped, "Timer programme overlapped" appears, and the overlapped programme will be displayed in blue. To correct the timer programme refer to "Checking, Cancelling or Correcting the Timer Programming Information" on page 27.
- If the Start time is earlier and the End time is later than the current time, the recording will start immediately after you press **[TIMER SET]**.
- If a videotape ends during the timer recording, the unit will automatically stop, eject the videotape, and turn itself off. To continue recording, insert a recordable tape.

## Priority of overlapped settings

The unit records programmes according to priority if the timer programmes overlap.

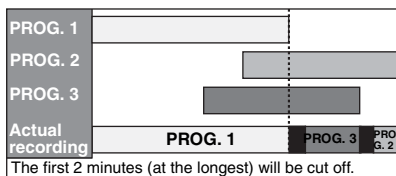
### If the starting time is same:

- The timer programming set first (PROG. 1) has priority.



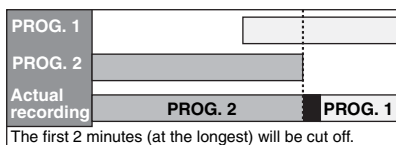
### When the starting time and the ending time for each programmes are different:

- A programme that has earlier start time has priority.



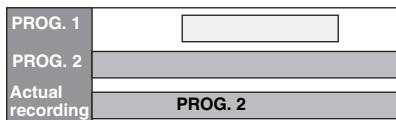
### If the recording time is partially overlapped:

- The timer programming with the earlier start time (PROG. 2) has priority. PROG. 1 will start after PROG. 2 recording is complete.



### If the recording time entirely overlaps:

- The shorter timer programming (PROG. 1) is not recorded.

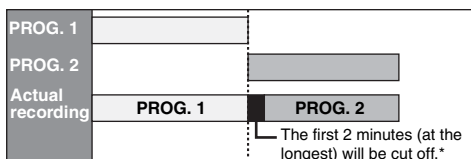


## Note for DVD recording

- If the recording time of two programmes are overlapped, or the End time of a programme and the Start time of another is same, the first 2 minutes (at the longest) of the subsequent programme will be cut off.

### If the End time of the programme currently being recorded and the Start time of the subsequent programme are same:

- If PROG. 1 is a DVD recorded programme, the beginning of the PROG. 2 may be cut off.



- \* If the cut off time exceeds 3 minutes, the error number "E40" will appear in "Timer Programming" list.



## Satellite Link

You can set the unit to start recording whenever it detects the video start control from the external tuner.

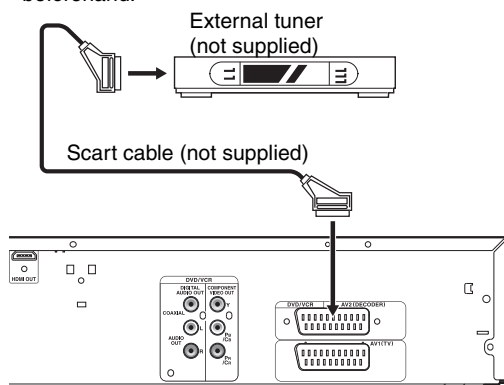
### Preparing for the satellite link timer recording:

#### [Preparation of the external tuner]

- The external tuner should be equipped with some kind of timer function. Using timer function of the tuner, set it to be turned on when it comes to the time you want to start recording, and off when it comes to the time you want to finish recording. (Refer to the tuner's manual on how to set the timer.)
- Make sure to turn off the external tuner when you finish setting.

#### [Preparation of this unit]

- Make sure to select the desired recording speed beforehand.



**1** In stop mode, press [DVD]/[VCR] to select the DVD mode or the VCR mode, then select the recording speed using [REC SPEED].

**2** Press [SAT.LINK].

- "Sat" will appear on the front panel display and the unit goes into the satellite link standby mode.



To cancel the satellite link function in the satellite link standby mode:

Press [TIMER SET] or [SAT.LINK] to turn on the unit.

To cancel the satellite link function while the satellite link recording is in progress:

**On the front panel**

Press [STOP ■].

**On the remote control**

- Press [STOP ■].
- Select "Yes" using [▲ / ▼], then press [ENTER].

### Note

- If you have not set the clock, the clock setting window will appear and follow to "Clock" on page 61.
- You cannot set the End time for the satellite link timer recording on this unit.
- Recording picture will be distorted if the copy protection signal is being detected during satellite link timer recording.
- When a regular timer recording and the satellite link timer recording are overlapped, the examples are given below.

	Example 1
Timer Recording	
Satellite Link	
Actual Recording	

	Example 2
Timer Recording	
Satellite Link	
Actual Recording	

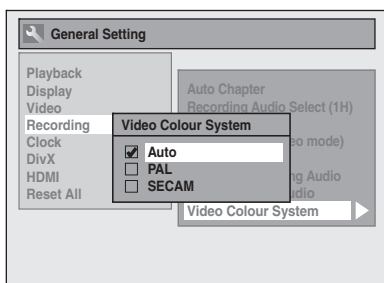
	Example 3
Timer Recording	
Satellite Link	
Actual Recording	

## Settings for External Equipment

### Video Colour System

When you record from external equipment or copy a videotape to a DVD disc, you can set the format Auto, PAL or SECAM.

- 1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER].
- 2 Select "Recording" using [▲ / ▼], then press [ENTER].
- 3 Select "Video Colour System" using [▲ / ▼], then press [ENTER].
- 4 Select "Auto", "PAL" or "SECAM" using [▲ / ▼], then press [ENTER].



**Auto:** The video colour system will be set automatically according to the recording material.

**PAL:** The video colour system will be set to PAL.

**SECAM:** The video colour system will be set to SECAM.

- 5 Press [SETUP] to exit.

#### Note

- During recording, when a signal other than PAL or SECAM is detected, an error message appears on the screen and recording will be paused. Recording will be resumed when a PAL or SECAM signal is detected.

### Recording from External Equipment



Before recording from external equipment, see page 19 for connection instructions.

- 1 Turn on the TV and be sure to select the input to which the unit is connected.

- 2 **When you want to record to the disc:**

Press [DVD].

Press [OPEN/CLOSE EJECT ▲] to open the disc tray, then place the disc to record on.

Press [OPEN/CLOSE EJECT ▲] again to close the disc tray.

**When you want to record to a videotape:**

Press [VCR].

Insert a videotape with a record tab into the cassette compartment.

- 3 Select the input terminal to which the external equipment is connected (AV1 or AV2).  
Press [AUX ▲ / ▼] repeatedly to select AV1 or AV2.
- 4 Select a recording speed using [REC SPEED].  
Refer to "Recording Speed" on page 21 for DVD or page 62 for VCR.
- 5 Press [RECORD ●] (DVD / VCR) on the unit to start recording.
- 6 Press the [PLAY ►] button on the external equipment.
- 7 **For disc:**  
Press [STOP ■] on the unit to stop recording.

**For videotape:**

Press [STOP/EJECT ■ ▲] on the unit to stop recording.

#### Note

- During recording, recording will be paused when a signal other than PAL or SECAM is detected. (See "Video Colour System" on page 30 for details.)
- The signal from the external device will be output automatically when the TV is connected to AV1 and the external device is connected to AV2 using a Scart cable with its power on. (However, it will not be output when this unit's power is turned off.)  
**If you want to monitor this unit's signal, press [DISPLAY] or turn the external device off.** (The signal from this unit can only be monitored during playback.)  
**If you want to monitor the signal from other input, press [DISPLAY], then select the desired input channel using [AUX ▲ / ▼].**

## Information on DV Dubbing

This function helps you to dub the contents in the DVC (digital video camcorder) to DVD or VCR easily. (See page 63 for DVC to VCR Dubbing.)

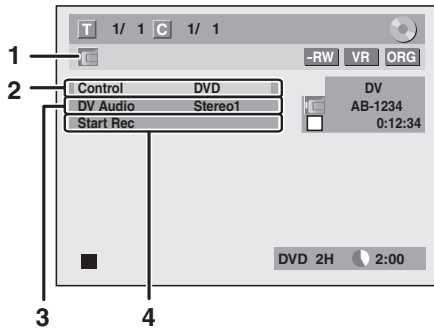
You can control basic operations of the DVC from the remote control of this unit if the DVC is in video mode.

### Guide to DV and On-Screen Display

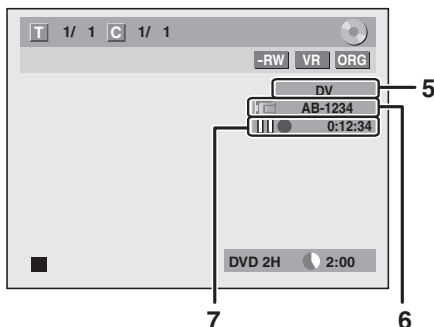
- 1 Connect your DVC to the DV-IN jack on the front panel using a DV cable. (Use the DV cable that has 4-pin input jack and is compliance with the IEEE 1394 standards.)
- 2 Press [AUX ▲ / ▼] repeatedly to select DV(AV3).

### 3 Press [DISPLAY] to display the DVC information on the screen.

When the DVC is in video mode...



When the DVC is in camera mode...



The menu changes according to the mode of DVC. Switch the mode on the DVC to video mode for the dubbing information.

The following instructions are described with the operations using the remote control of this unit.

#### 1 DV icon

#### 2 Indicator of active device

- With "Control" highlighted, press [ENTER] to display the available devices to control with the remote control of this unit. Select the device you want to operate using [▲ / ▼], then press [ENTER].
- Select "DVD" to control this unit with the remote control of this unit.
- Select "DVC" to control your DVC with the remote control of this unit.

#### 3 Recording audio mode

- "DV Audio" can be changed. With "DV Audio" selected, press [ENTER] to display "DV Audio" menu. Select the audio you want to output using [▲ / ▼], then press [ENTER].
- Select "Stereo1" to dub the stereo sound.
- Select "Stereo2" to dub the sound that was added after the recording.
- Select "Mix" to dub the stereo1 and stereo2.

#### 4 Command menu

- "Start Rec" or "Pause Rec" will appear.

#### 5 External input channel

#### 6 Product name of your DVC

- If the unit cannot recognise the input signal from the DVC or if it is the unknown product, "No Device" or "\*\*\*\*\*" will appear instead.

### 7 Status of the current operation and the time counter

Each icon means (Available icons may vary depending on the DVC):

- DVC is in stop mode.
- ▶ DVC is in playback mode.
- || DVC is in pause mode.
- ▶▶ DVC is fast forwarding. (standard speed)
- ▶▶▶ DVC is fast forwarding. (faster than above)
- ▶▶▶▶ DVC is fast forwarding. (faster than above)
- ||▶▶ DVC is slow forwarding. (standard speed)
- ||▶▶▶ DVC is slow forwarding. (faster than above)
- ||▶▶▶▶ DVC is slow forwarding. (faster than above)
- ▶▶▶ DVC is fast forwarding. (in stop mode)
- ◀◀ DVC is fast reversing. (in stop mode)
- ▶◀ DVC is fast reversing. (standard speed)
- ▶◀◀ DVC is fast reversing. (faster than above)
- ▶◀◀◀ DVC is fast reversing. (faster than above)
- ||◀ DVC is in slow reverse playback.
- DVC is in recording.
- ||● DVC is in recording pause mode.

Please also read the operating instructions of your DVC for more information.

## DVC to DVD Dubbing



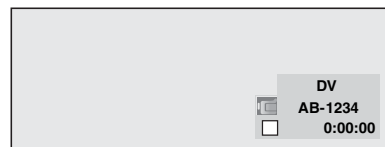
Before recording from DVC, see page 19 for connection instructions. (See page 63 for DVC to VCR Dubbing.)

#### Preparing for DV dubbing (DVC to DVD):

- Insert a recordable DVD.
- Make sure your DVC is in video mode.

Press [DVD] first.

#### 1 Press [AUX ▲ / ▼] repeatedly to select DV(AV3).



#### 2 Press [REC SPEED] to select a recording speed. (See page 21.)

#### 3 Press [DISPLAY].

- 4** With “Control” highlighted, press [ENTER] to display the available devices to control with the remote control of this unit. Select “DVC” using [▲ / ▼], then press [ENTER].

e.g.) DVC to DVD dubbing



Now you can operate your DVC with the remote control of this unit.

- 5** Press [PLAY ►] to start playing back the DVC, and find where you want to start dubbing. Press [STOP ■] when it comes to the desired start point.

- 6** Select “Start Rec” using [▲ / ▼], then press [ENTER].

The dubbing will start.

### To stop dubbing:

- 1) Select “Control” using [▲ / ▼], then press [ENTER].
- 2) Select “DVD” using [▲ / ▼], then press [ENTER].
- 3) Press [STOP ■].

### Note

- The tape will rewind a few seconds when you press [ENTER] at step 6 so that the dubbing starts exactly where you press [PAUSE II] instead of [STOP ■] at step 5.
- The unit does not send out the output signal to DVC.
- For the proper operation, connect DVC to the unit directly. Do not connect this unit and DVC via any other unit.
- Do not connect more than one DVC.
- The unit can only accept DVC. Other DV device such as cable/satellite box or D-VHS recorder cannot be recognised.
- If no video signal is detected from the DVC during DVC to DVD dubbing, the recording will be paused and “●” will flash on the TV screen. The recording will resume when the unit detects the video signal again.
- When the DVC is in camera mode, refer to “Guide to DV and On-Screen Display” on page 30.
- Date / time and cassette memory data will not be recorded.
- Pictures with a copy-guard signal cannot be recorded.
- A DV terminal is a terminal that can use the transmission mode conforming to the IEEE 1394 standards called “Fire Wire”. It serves as the interface that connects the PC and peripheral device such as “i.LINK” (registered trademark of SONY). It enables digital dubbing between DV devices with little degradation.

## Dubbing Mode

You can copy a DVD disc to a videotape or copy a videotape to a DVD disc. This function will be possible only if the DVD or the videotape is not copy protected.

Before dubbing, prepare for the recording on the DVDs or the videotape. See pages 21-22 (DVD) or page 62 (VCR).

### Note for recording to a videotape:

- The videotape’s record tab is intact.
- The videotape is long enough to record the DVD disc.

### Note for recording to a disc:

- The DVD disc is satisfied with the recording status. See pages 21-22.

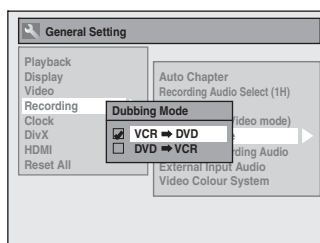
### Insert a disc and a videotape with a record tab.

- 1 In stop mode, press [SETUP]. Select “General Setting” using [▲ / ▼], then press [ENTER].
- 2 Select “Recording” using [▲ / ▼], then press [ENTER].
- 3 Select “Dubbing Mode” using [▲ / ▼], then press [ENTER].

Option window will appear.

### VCR to DVD

- 4** Select “VCR → DVD” using [▲ / ▼], then press [ENTER].



- 5 Press [SETUP] to exit.
- 6 Press [VCR].
- 7 Press [PLAY ►], and then press [PAUSE II] where you want to start recording.
- 8 Press [DVD].  
Make sure to select a recording speed using [REC SPEED]. (See page 21.)
- 9 Press [DUBBING].  
VCR to DVD duplication will start.
- 10 Press [STOP ■] to stop the recording.

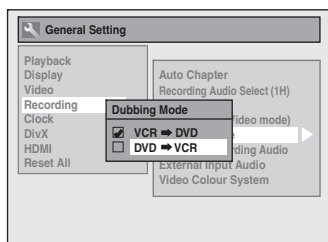
### Note for VCR to DVD duplication:

- During duplication, recording will be paused when a signal other than PAL or SECAM is detected. (See “Video Colour System” on page 30 for details.)
- After starting VCR to DVD duplication, the picture may be distorted because of the auto tracking function. This is not a malfunction. Be advised to play back the tape until the picture is stabilised, then set the starting point at which you want to start recording, and start VCR to DVD duplication.

- This unit will automatically stop the duplication if playback with no image detected for more than 3 minutes during VCR to DVD duplication.
- If the playback sound mode of VCR is set to "STEREO", "LEFT" or "RIGHT", the sound mode upon dubbing is automatically switched to "STEREO". If the playback sound mode is set to "MONO", the sound mode upon dubbing is also "MONO".
- If you set "External Input Audio" to "Stereo", the sound is recorded in "Stereo" (video mode and VR mode).
- While in video mode, if you set "External Input Audio" to "Bilingual", the audio set in "Bilingual Recording Audio" mode is recorded. While in VR mode, if you set "External Input Audio" to "Bilingual", bilingual audio is recorded.
- The main and sub audio will be simultaneously recorded (VR mode). You can select audio modes during playback.
- If you want to watch the duplicated material, after the VCR to DVD duplication, press [DVD] first then press [PLAY ►].

## DVD to VCR

- 4 Select "DVD → VCR" using [▲ / ▼], then press [ENTER].**



- 5 Press [SETUP] to exit "Setup" menu.**
- 6 Press [DVD].**
- 7 Press [PLAY ►], and then press [PAUSE II] at the point you want to start recording.**
- 8 Press [VCR].**  
Make sure to select a recording speed using [REC SPEED]. (See page 62.)  
Rewind or fast forward the tape to the point where you want to start recording.
- 9 Press [DUBBING].**  
DVD to VCR duplication will start.
- 10 Press [STOP ■] to stop the recording.**

### Note

- NTSC dubbing is prohibited in this unit.
- Dubbing mode is available only if the tape or disc is not copy-protected.
- You cannot change the output mode during VCR to DVD or DVD to VCR duplication.
- If you want to watch the duplicated material, after the DVD to VCR duplication, press [VCR] first and then press [PLAY ►].
- When "DV" is selected as input, DUBBING function cannot be performed. DUBBING can be performed with either AV1 or AV2 inputs.

## Setting a Disc to Protect



To prevent accidental over-recording, editing or erasing of recordings, you can protect them using "Setup" menu.

### Insert a recordable disc.

- 1 In stop mode, press [SETUP].**
- 2 Select "DVD Menu" using [▲ / ▼], then press [ENTER].**
- 3 Select "Disc Protect OFF → ON" using [▲ / ▼], then press [ENTER].**
- 4 Select "Yes" using [▲ / ▼], then press [ENTER].**  
The disc is protected.
- 5 Press [SETUP] to exit.**

### Note

- The Disc Protect setting is available only when a disc recorded in VR mode is inserted.
- You can select only "Disc Protect ON → OFF" when a protected disc is inserted.

### To cancel the disc protect:

- Select "Disc Protect ON → OFF" at step 3, then select "Yes".
- If you insert a disc protected with this unit, "Disc Protect ON → OFF" will appear instead of "OFF → ON".

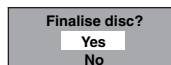
## Finalising Discs



You will need to finalise discs to play them back in other units. Finalising may take from several minutes up to an hour. A shorter recording period on the disc will require a longer time period for finalisation. Do not unplug the mains cable during finalisation.

### Insert a recordable disc before finalising.

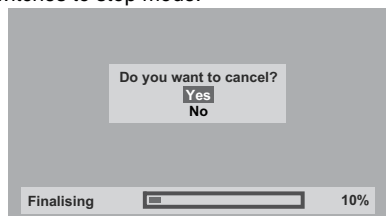
- 1 In stop mode, press [SETUP].**
- 2 Select "DVD Menu" using [▲ / ▼], then press [ENTER].**
- 3 Select "Finalise" using [▲ / ▼], then press [ENTER].**
- 4 Select "Yes" using [▲ / ▼], then press [ENTER].**



Finalising will start.

### To cancel finalising (DVD-RW disc only):

At step 4, press [STOP ■]. Select "Yes" using [▲ / ▼], then press [ENTER]. Finalising is cancelled and the unit switches to stop mode.



If "⏻" appears when [STOP ■] is pressed, you cannot cancel finalising because the finalising has already reached at a critical point in its process.

If "No" is selected and [ENTER] or [RETURN] is pressed, finalising is continued.

You cannot cancel finalising a DVD-R disc once it has started.

## 5 Finalising is complete.

### Note

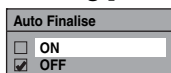
- Finalising a disc in video mode automatically creates a Title menu.
- After you finalise DVD-RW/-R disc, you can edit or record only on a video mode disc.
- To release the finalisation of the disc, select "Undo Finalise" at step 3.
- If you insert a DVD-RW disc finalised with this unit, "Undo Finalise" will appear instead of "Finalise".
- DO NOT power off during finalising. This may result in a malfunction.

## Auto Finalise



You can finalise discs automatically when the disc space runs out if you set this in "Setup" menu.

- 1 In stop mode, press [SETUP]. Select "General Setting" using [▲ / ▼], then press [ENTER].
- 2 Select "Recording" using [▲ / ▼], then press [ENTER].
- 3 Select "Auto Finalise" using [▲ / ▼], then press [ENTER].
- 4 Select "ON" using [▲ / ▼], then press [ENTER].



- 5 Press [SETUP] to exit.

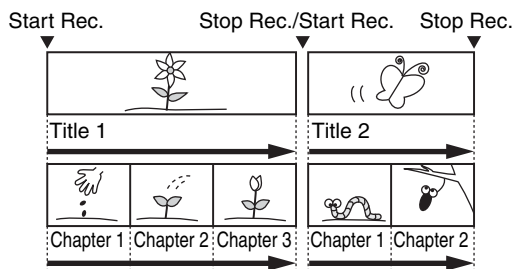
### Note

- Auto finalise function is not available for discs formatted in VR mode disc.

## Basic Playback

### Note for DVD Playback

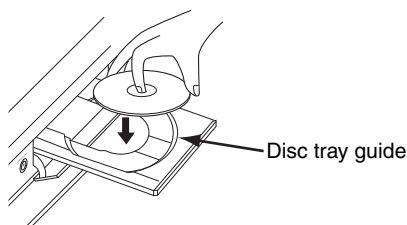
The contents of a DVD are generally divided into titles. Titles are further subdivided into chapters depend on Auto Chapter setting (See page 23).



### Playing Back a DVD-RW / DVD-R Disc



- 1 Press **[STANDBY-ON ⏻]** to turn on the unit.  
Turn on the TV and be sure to select the input to which the unit is connected.
- 2 Press **[DVD]**.
- 3 Press **[OPEN/CLOSE EJECT ▲]** to open the disc tray.
- 4 Place the disc on the disc tray with its label facing up. Be sure to align the disc with the disc tray guide.



- 5 Press **[OPEN/CLOSE EJECT ▲]** to close the disc tray.
- 6 Press **[TOP MENU]** to display the Title list.  
You can switch between the "Original" and "Playlist" in the VR mode DVD-RW disc using **[MENU/LIST]**.
- 7 Select the desired title using **[▲ / ▼ / ◀ / ▶]**, then press **[ENTER]**.  
Pop up window will appear.
- 8 Select "Play From Start" using **[▲ / ▼]**, then press **[ENTER]**.  
Playback will start.

- 9 Press **[STOP ■]** to stop playback.

To eject the disc, press **[OPEN/CLOSE EJECT ▲]** to open the disc tray, then remove the disc. Press **[OPEN/CLOSE EJECT ▲]** to close the disc tray before turning off the unit.

#### Note

- For DVD-R (video mode) and DVD-RW (video mode) discs that are already finalised, a Title menu will be displayed instead of thumbnails.
- You can resume playback from where you stopped playing back the disc (Resume playback). See page 40 for details.
- You can also start playback by pressing **[PLAY ▶]** instead of **[ENTER]** at steps 7 and 8.
- Some discs may start playback automatically.

### Playing Back a DVD-V

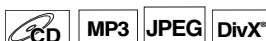


- 1 Follow steps 1 to 5 in "Playing Back a DVD-RW / DVD-R Disc" on page 35.
- 2 Press **[PLAY ▶]** to start playback.  
Playback will start.  
If you play back a DVD-video, a disc menu may appear. See page 39 for details.
- 3 Press **[STOP ■]** to stop playback.

#### Note

- Some discs may start playback automatically.

### Playing Back an Audio CD or a Disc with MP3 / JPEG / DivX® Files

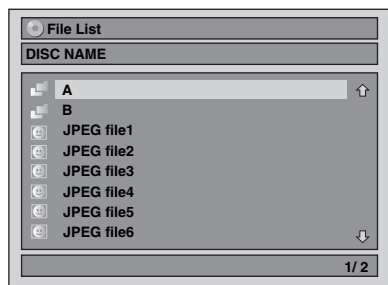


- 1 Follow steps 1 to 5 in "Playing Back a DVD-RW / DVD-R Disc" on page 35.
- 2 If you want to play back an audio CD or a disc with a single file type (e.g., a disc containing MP3 files only), skip to step 4.  
If you want to play back a disc with mixed file types, proceed to step 3.
- 3 Select the desired file type using **[▲ / ▼]**, then press **[ENTER]**.  
If you want to change the media type, press **[◀]**. Select the desired media type using **[▲ / ▼]**, then press **[ENTER]**. (You can also access the media type selection screen from the "Title List" in the "Setup" menu in stop mode.)
  - Video Files: The DivX® File List will appear.
  - Music: The MP3 File List will appear.
  - Photo: The JPEG File List will appear.



#### 4 Press [▲ / ▼] to select the desired track / file or folder, then press [ENTER].

e.g.) Photo (JPEG) files



##### If a track / file is selected:

Playback will start.

##### If a folder is selected:

The files in the folder will appear.

Press [▲ / ▼] to select the file or folder you want, then press [ENTER].

- You can also call up the file type selection screen by following the steps below;  
In stop mode, press [SETUP]. Select "Title List" using [▲ / ▼], then press [ENTER]. Select the media type using [▲ / ▼], then press [ENTER].
- To exit the File List, press [TOP MENU] or press [STOP ■].
- To resume the File List, press [TOP MENU].
- Press [PLAY ►], [ENTER] or [►] to move to any lower folders.
- Press [◀] to move back to the folder above.

##### Note for audio CD tracks and MP3 / JPEG files:

- Folders are shown with the icon.
- Audio CD tracks are shown by .
- MP3 files are shown with the icon.  
Playback will start from the selected track and continue with each one after.
- JPEG files are shown with the .
- The unit can recognise up to 255 folders and up to 99 tracks / 999 files.
- Letters of a file / folder name overflowing the given space will be displayed as "...".
- Unplayable folders and tracks / files may be displayed depending on the recording conditions.
- For MP3 file recorded in Variable Bit Rate (VBR), the unit may not display the actual elapsed time.
- If there are no files in the folder, "No Files" is displayed.
- High resolution or large-size JPEG files take a few moments to be displayed.
- It is not possible to play back progressive JPEGs (JPEG files saved in progressive format) on this unit.
- It is not possible to play back JPEG files of 12 MB or more.

##### It is recommended that files to be played back in this unit are recorded under the following specifications:

###### [MP3]

- Sampling frequency : 44.1 kHz or 48 kHz
- Constant Bit Rate : 112 kbps to 320 kbps

###### [JPEG] Size of picture

- Upper limit : 6,300 x 5,100 dots
- Lower limit : 32 x 32 dots
- Capacity limit : less than 12 MB

#### Note

- Files with extensions other than ".mp3 (MP3)" or ".jpg / .jpeg (JPEG)" will not be listed in the File List.
- Some folders or tracks listed in the File List may be unplayable due to their recording status.
- The File List displays only up to 8 folders and file names.

#### Notes on JPEG:

After file is displayed for 5 seconds or 10 seconds (set in the "Slide Show" on page 45), the display moves to the next file. During JPEG playback, press [►] or [◀] to rotate a picture 90 degrees clockwise or counterclockwise respectively. (Not available when the display menu appears.)

### Playing Back a USB Device with MP3 / JPEG / DivX® Files

**MP3** **JPEG** **DivX®**

You can play back the contents in a USB device.

#### Note for DivX®

- DivX® files recorded in USB device are not guaranteed to play back.

### USB Playback

About file types	
Playable	Not Playable
.mp3 (MP3)	File extensions other than these, as shown on the left are not playable or will not be listed in the File List.
.jpg (JPEG)	
.avi (DivX®)	

Compatible / Incompatible devices	
Compatible	Incompatible
<b>USB flash memories (max. 32GB)</b>	USB hubs
	USB devices with an inner hub
	PC's
	Cameras
	Devices which require a driver (e.g. some MP3 players)
	Bus-powered HDD's

#### USB device requirements:

- USB version 2.0 (Full Speed)
- USB devices formatted with the FAT16 / FAT32 file system are supported.
- Up to 8 characters (excluding the extension) are displayed as a file / folder name. 9 or more characters cannot be displayed.
- The maximum supply current from the USB port is up to 500 mA.

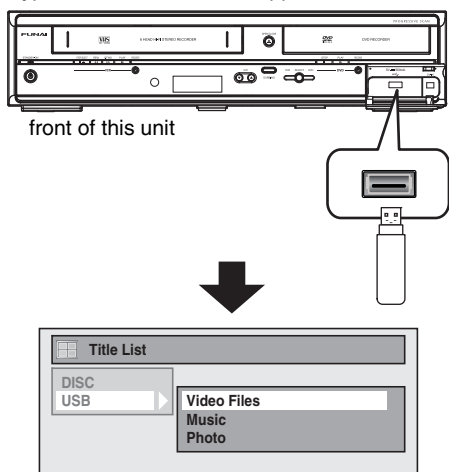
#### Note

- A USB device cannot be used under the following conditions.
  - During the operation of the disc tray
  - During the disc loading, DVD recording, DVD/CD playback, editing or dubbing
  - While "Title List" or "File List" of disc is displayed
  - While "Setup", "Timer Programming" or "EPG" menu is displayed
- Do not disconnect the USB device while the indicator on the device is flickering.



# 1 In stop mode, plug your USB flash memory.

File type selection screen will appear.



## 2 Select the desired file type using [▲ / ▼], then press [ENTER].

If you want to change the media type, press [◀]. Select the desired media type using [▲ / ▼], then press [ENTER]. (You can also access the media type selection screen from the "Title List" in the "Setup" menu in stop mode.)

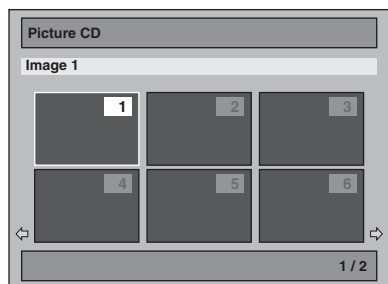
- Video Files: The DivX® File List will appear (not guaranteed).
- Music: The MP3 File List will appear.
- Photo: The JPEG File List will appear.

## 3 Follow the step 4 in "Playing Back an Audio CD or a Disc with MP3 / JPEG / DivX® Files" on pages 35-36.

### KODAK Picture CD

KODAK Picture CD is a service that converts and stores photographs taken by a conventional film camera into digital data and writes the data on a CD. You can enjoy your digital images on the TV by playing back the KODAK Picture CDs. For local service providers, please refer to [www.kodak.com/](http://www.kodak.com/) Press [DVD] first.

## 1 Press [TOP MENU].



- To exit the Picture CD thumbnail List, press [TOP MENU], [STOP ■] or [RETURN].

If all menu items cannot be displayed in the screen scope, the ➡ appears at the right bottom and the ◀ appears at the left bottom of the screen and you can view other items on the next or previous page. The track number of the items currently played back is highlighted.

If the ➡ is shown at the right bottom, use [SKIP ►►] to view the next page. If the ◀ is shown at the left bottom, use [SKIP ◀◀] to view the previous page.

It may take some time until all menu items are displayed on the menu screen.

## 2 Press [▲ / ▼ / ◀ / ►] to select a desired track to be played back, then press [PLAY ►] or [ENTER].

An image will be played back from the selected track and go to the next one in turn.

## 3 Press [STOP ■] to stop playback.

### Note

- After a track is displayed for 5 seconds or 10 seconds (set in the "Slide Show" on page 45), the display moves to the next file.
- During JPEG or KODAK Picture CD playback, press [►] or [◀] to rotate a picture 90 degrees clockwise or counterclockwise respectively. (Not available when the display menu appears.)

### DivX® Subtitle

The subtitle created by the user can be displayed during DivX® playback.

## 1 After the DivX® file is selected, "Subtitle List" will appear.

## 2 Select the desired extension of the subtitle file you want to display using [▲ / ▼], then press [ENTER]. DivX® with the subtitle starts playback. The subtitle cannot be displayed when the setting is "OFF".

- If there is more than one extension, the extension selection will appear in "Subtitle List".

### Note

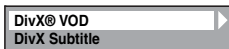
- "DivX Subtitle" must be activated in the DivX® menu. (Refer to "[2] DivX Subtitle (Default: OFF)" on page 61.)
- Playback file and the subtitle file must have the same name.
- Playback file and the subtitle file must locate in the same folder.
- Only the subtitle files with the following extensions are supported; .smi (.SMI), .srt (.SRT), .sub (.SUB), .ass (.ASS), .ssa (.SSA), .txt (.TXT). (.sub (.SUB) and .txt (.TXT) files may not be recognised.)
- The subtitles that exceed the playback time of the DivX® file will not be displayed.

## DivX® VOD

### DivX®

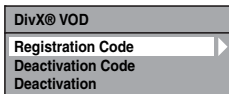
This unit allows you to play back the files purchased or rented from DivX® Video-On-Demand (VOD) services. The files are available on the Internet. When you purchase or rent DivX® VOD files on the Internet, you will be asked to enter a registration code and a deactivation code. This menu items provide you with the both codes.

- 1 Press [SETUP].
- 2 Select "General Setting" using [▲ / ▼], then press [ENTER].
- 3 Select "DivX" using [▲ / ▼], then press [ENTER].
- 4 Select "DivX® VOD" using [▲ / ▼], then press [ENTER].



DivX® VOD selection screen will appear.

- 5 Select "Registration Code" or "Deactivation Code" using [▲ / ▼], then press [ENTER].



Your registration code or deactivation code will appear.

e.g.) Registration Code



### To deactivate this unit:

You can register 6 devices (1PC and 5 devices) for an account of DivX®. If you want to use more than 6 devices, you must deactivate unnecessary one. If you want to deactivate this unit, please follow the steps below.

At step 5, select "Deactivation" using [▲ / ▼], then press [ENTER]. Confirmation screen will appear. Select "Yes" using [▲ / ▼], then press [ENTER].

This unit is deactivated.

You can get the new registration code and deactivation code.

You will be asked to enter the new codes when you download a DivX® VOD file next time.

### Note

- You must first download the file from the Internet and play it back on this unit before you are able to get another code.
- Once you play back the DivX® VOD file, you will not be able to select "Registration Code" and "Deactivation Code" unless you deactivate the unit.
- You must follow this step every time you purchase or rent a DivX® VOD file from the Internet for a deactivated unit.

It is recommended that files to be played back in this unit are recorded under the following specifications:

[DivX®]

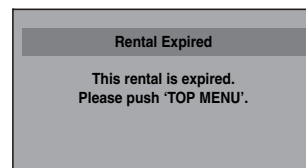
- Official DivX® Certified product
- Playable Codec of AVI files : DivX®3.x, DivX®4.x, DivX®5.x, DivX®6.x
- Maximum size of image : 720 x 480 @30 fps  
720 x 576 @25 fps
- Sampling frequency of audio : 16 kHz - 48 kHz
- Audio type : MPEG1 audio layer 3 (MP3),  
MPEG1 audio layer 2,  
Dolby Digital

### Hint for the purchased or rental official DivX® Certified product

- When you purchased or rental a DivX® file through the official site of DivX® video which is called DivX® Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX® VOD services. Refer to "DivX® VOD" on page 38.
- Some DivX® VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX® VOD file has such limit, the playback confirmation screen will appear.

Use [◀ / ▶] to select "Yes" if you want to play back the file, or to select "No" if you do not want to play it back. Then press [ENTER] to confirm the selection.

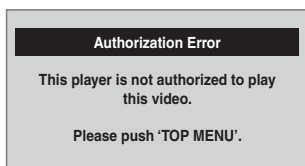
- You cannot play back the DivX® VOD files of which rental period has been expired. In such case, press [TOP MENU] and select other files that can be played back.



### Note for DivX®

- DivX® is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any sources to the size that can be sent on the Internet without compromising visual quality of the images.
- For discs, a file with an extension of ".avi" and ".divx" can be played back as a DivX® file.
- Files whose extension other than ".avi" and ".divx" will not be listed on the DivX® menu. However, unplayable groups or tracks may be displayed, depending on the recording conditions.
- Even if the file has an extension of either ".avi" and ".divx", this unit cannot play it back if it is recorded in the format other than DivX®.
- Folders are known as Groups; files are known as tracks.
- A symbol of [ ] is shown on the top of the file name.
- A maximum of 255 folders or 999 files may be recognised in one disc.
- Up to 8 hierarchies can be recognised in one folder. Files in the 9th or deeper hierarchies cannot be played back.
- If the track extends beyond the scope of screen, a down arrow "⏴" appears, indicating that the user can view another part on the next page. The current page number and the number of total pages are shown on the right of the down arrow "⏴".
- Letters of a file / folder name overflowing the given space will be displayed as "...".

- You can play back the disc recorded in multi-session.
- It may take awhile for audio and images to be output after you inserted a disc and pressed **[PLAY ▶]**.
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX® logo has been obtained for this unit, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- Use the software recognised by the DivX, Inc. when you make DivX® files.
- A DivX® file whose file size exceeds 2 GB cannot be played back.
- If you try to play back the DivX® file that has the screen resolution, audio format and frame rate (over 30 fps) which this unit does not support, an error message will appear.
- If a large-sized DivX® file is selected, it may take awhile to start the playback (over 20 seconds sometimes).
- If DivX® files written on CD discs cannot be played back, rewrite them on a DVD disc and try to play back.
- For more information for DivX®, please visit <http://www.divx.com>.
- You cannot play back the DivX® VOD files obtained with different registration codes on this unit. Press **[TOP MENU]** and select other files that can be played back.
- This unit does not support the DivX® file with UDF format.



## Playing Back Discs Using the Disc Menu



A DVD contains a disc menu, which lists the contents and enables you to customise playback. The menu may offer choices for subtitle languages, special features, and chapter selection. Usually this information appears automatically when you start playback, but sometimes you need to press **[MENU/LIST]** to display the menu.

**Press [DVD] first.**

### 1 Press [MENU/LIST].

If the feature is not available, “⊗” may appear on the TV screen. The displayed disc menu, which will vary among discs, and may be same with the Title menu.

### 2 Select an item using [▲ / ▼ / ◀ / ▶], then press [ENTER].

Repeat this step until all the features you want are set up or to start playing back the disc from the menu. The following operation is available.

**[the Number buttons]:**

Selects a numbered menu option (available on certain discs).

### 3 Press [MENU/LIST] to exit the disc menu.

#### Note

- Menus vary among discs. Refer to the information accompanying the disc for details.

## Playing Back a Disc Using the Title Menu



Some DVDs have a Title menu, which lists the titles available on the DVD. You can start playing back such discs at a specific title.

On this unit, if you finalise video mode disc, a Title Menu will be created automatically.

**Press [DVD] first.**

### 1 Press [TOP MENU].

The Title Menu will appear.

- For some discs, the Title Menu appears automatically.

If the feature is not available, “⊗” may appear on the TV screen.

### 2 Select a desired item using [▲ / ▼ / ◀ / ▶], then press [ENTER].

The disc will start playing back at the title you selected. The following operations are available.

**[TOP MENU] button:**

Displays the DVD “Title Menu” which will vary between discs.

**[▲ / ▼ / ◀ / ▶] buttons:**

Move the cursor from item to item on the screen.

**[ENTER] button:**

Selects the currently highlighted menu option.

**[the Number buttons]:**

Selects a numbered menu option (available on certain discs).

### 3 Press [TOP MENU] to exit.

#### Note

- **[TOP MENU]** will not be available for some DVDs.
- Menus vary among discs. Refer to the information accompanying the disc for details.

## Special Playback

### Resume Playback



You can resume playback from the point where you stopped it before.

#### 1 During playback, press [STOP ■].

The resume message will appear.

#### 2 Press [PLAY ►].

In a few seconds, playback will resume from the point at which you stopped it before. Even if you turn off the unit, you can resume playback at the same point after turning back on the unit.

**To cancel the resume playback and start playing back the disc from the beginning:**

Press [STOP ■] while playback is stopped.

#### Note

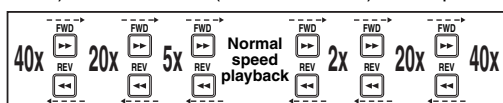
- For MP3 and JPEG files, playback will resume from the beginning of the track at which playback was stopped.

### Fast Forward / Fast Reverse



#### 1 During playback, press [FWD ►►] or [REV ◄◄].

Each time you press [FWD ►►] or [REV ◄◄], the approximate speed will change as follows.  
Fast forward or fast reverse playback across titles (for DVDs) or tracks / files (for MP3 / DivX®) is not possible.



- For audio CDs and MP3 files approximate speed is fixed at 8x with sound.
- For DivX® files, approximate forward speeds are 2x, 20x and 40x, and approximate reverse speeds are 5x, 20x and 40x.
- To return to playback at normal speed, press [PLAY ►].
- Picture quality of DivX® files in fast reverse is lower than that in fast forward.
- For some DivX® files, Fast forward/Fast reverse may not function.

#### Note

- Forward / reverse speeds are indicated with icons as follows.  
Forward (Approx. Speed):  
2x: ►►  
20x: ►►►  
40x: ►►►►  
Reverse (Approx. Speed):  
5x: ►◄  
20x: ►◄◄  
40x: ►◄◄◄

## Skipping TV Commercials during Playback



To enjoy recorded programmes without any interruptions, press [CM SKIP].

#### 1 During playback, press [CM SKIP].

Normal playback will start 30-second advanced point from the point at which you press [CM SKIP].

Each time you press [CM SKIP], the start point will move another 30 seconds forward and playback resume automatically.

You can press [CM SKIP] up to 6 times (180 seconds).

### Pause



#### 1 During playback, press [PAUSE II].

Playback will pause with the sound muted.

#### 2 Press [PLAY ►] to resume playback.

### Rapid Playback



**Rapid Playback function is available only during playback.**

Available only on discs recorded in the Dolby Digital format, Rapid Playback plays back in a slightly faster/slower speed while keeping the sound output.

#### 1 During playback, press [1.3x/0.8x PLAY].

- **x0.8**: Press [1.3x/0.8x PLAY] once during playback. Plays back approximately at 0.8 times of normal playback.
- **x1.3**: Press [1.3x/0.8x PLAY] twice during playback. Plays back approximately at 1.3 times of normal playback.
- : Press [1.3x/0.8x PLAY] thrice to play back in normal speed. No effects.

#### 2 Press [PLAY ►] to return to the normal playback.

#### Note

- Audio (language) setting cannot be changed while using this mode.
- This feature may not work at some point in a disc.
- Audio is PCM during Rapid Playback mode.
- When you select "PAL" in "TV System" (see page 59), this function is not available with discs recorded using the NTSC system.

## Step by Step Playback



- 1 During playback, press [PAUSE II].
- 2 Press [SKIP I◀◀ / ▶▶I] repeatedly.  
Each time you press [SKIP ▶▶I], playback will go forward one frame (or step) at a time with the sound muted.  
To go backward one frame (or step), press [SKIP I◀◀I].  
Press and hold [SKIP ▶▶I] to continue going forward.  
To continue going backward, press and hold [SKIP I◀◀I].
- 3 Press [PLAY ▶] to resume playback.

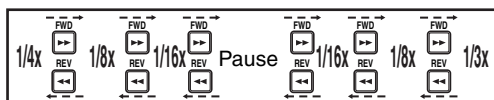
### Note

- Only step by step forward is available when playing back media with DivX® files.

## Slow Forward / Slow Reverse Playback



- 1 During playback, press [PAUSE II], then press [FWD ▶▶] or [REV ◀◀].  
Each time you press [FWD ▶▶] or [REV ◀◀], the approximate speed changes as follows.  
(The sound will remain muted.)



To return to normal playback, press [PLAY ▶].

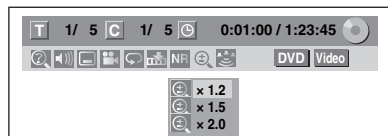
### Note

- Forward / reverse speeds are indicated with icons as follows.  
Forward (Approx. Speed):  
1/16x: ▶▶▶  
1/8x: ▶▶▶▶  
1/3x: ▶▶▶▶▶  
Reverse (Approx. Speed):  
1/16x: ◀◀◀  
1/8x: ◀◀◀◀  
1/4x: ◀◀◀◀◀
- For some DivX® files, Slow forward may not function.
- Only slow forward is available when playing back media with DivX® files.

## Zoom



- 1 During playback, press [DISPLAY] to bring up the display menu.
- 2 Select the [Z] icon using [◀ / ▶] to display the selection menu.



Four options are available, "x1.0", "x1.2", "x1.5" and "x2.0". These are displayed excluding the current zoom rate.

- 3 Select the desired zoom factor to zoom using [▲ / ▼], then press [ENTER].

The zoom area is displayed.

- 4 Select the desired zoom position using [▲ / ▼ / ◀ / ▶], then press [ENTER].

Zoom playback will start.

### Note

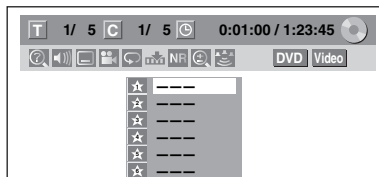
- To cancel the zoom function, select "x1.0" using [▲ / ▼], then press [ENTER].
- If selecting a smaller factor than that currently selected, the zoom area is not displayed.
- You cannot slide the zoomed picture on some JPEG files.

## Marker Setup



You can assign a specific point on a disc to return later.

- 1 During playback, press [DISPLAY] to bring up the display menu.  
If the display menu is already shown, skip to step 2.
- 2 Select the [M] icon using [◀ / ▶] to display the marker list.  
e.g.) DVD-video



- 3 Select the desired marker number using [▲ / ▼].  
When the disc reaches the desired point, press [ENTER].

The title (track) number and the time are displayed.

- 4 To return to the marker, select the desired marker number using [▲ / ▼], then press [ENTER].

### Note

- To clear a marker, select the marker number you want to clear, then press [CLEAR].
- You can mark up to 6 points.
- All markers are erased when you perform the following operations.
  - Opening the disc tray
  - Turning off the power
  - Making additional recording on the disc (DVD only)
  - Editing any title (DVD only)
  - Changing the mode between Original and Playlist. (VR mode DVD-RW disc only)

## Chasing Playback during Recording



You can play back a title being recorded from the beginning while recording continues. This function works from 1 minute after the start of the recording. Make sure to use a DVD-RW disc in VR mode, and the recording speed is set to 4H, 6H or 8H.

### 1 During recording, press [PLAY ►].

Playback of the title you are recording will start from the beginning.

If you play the fast forward playback and the playback reaches the scene recorded 1 minute before, the forwarding playback will automatically return to the normal playback.

### 2 To stop the playback, press [STOP ■] once.

The resume message will appear.

To stop recording, press [STOP ■] again.

To cancel the resume, press [STOP ■] again.

## Using the [TIME SHIFT] button

With [TIME SHIFT], even if you leave your couch while you are watching TV through this unit, you can come back and watch the rest of the programme right from where you left at any the convenient time with just one button. Please make sure to put VR mode DVD-RW disc, and set the recording speed to 4H, 6H or 8H.

### 1 While viewing a TV broadcast via this unit, press [TIME SHIFT].

This unit start to record the TV broadcast.

### 2 Press [TIME SHIFT] again.

Playback will start from where you first press [TIME SHIFT] while recording continues.

- While viewing the recorded content, you can pause and resume the playback by pressing [TIME SHIFT].

### 3 To stop the recording, press [STOP ■] twice.

#### Note

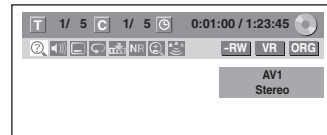
- Playback image may freeze momentarily using this function. However this does not affect the recording.
- The 2x fast forward playback is not available.
- [REC] is not available during this function.
- You must cancel this function first by pressing [STOP ■] once. Then you can use [REC] to use OTR (one-touch timer recording) function or change recording time for the OTR.
- "Wait for a moment." will be displayed on the screen if you press [PLAY ►] before 1 minute of recording.
- **This function is available only when you are recording on a DVD-RW disc in VR mode, with the recording speed 4H, 6H or 8H.**
- Use DVD-RW disc capable of 2x or 4x speed recording.

## Simultaneous Playback and Recording



You can also play back a recorded title during current recording or the Timer Recording on the same disc.

### 1 During recording, press [DISPLAY].



### 2 Select [?] icon using [◀ / ▶], then press [ENTER].

The title number next to **T** will be highlighted.

#### Title:

Enter a desired title number to search using [▲ / ▼] or [the Number buttons], then press [ENTER].

Selected title playback will start.

#### Chapter:

To move to **C** for chapter, press [▶].

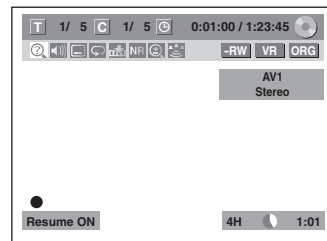
Enter a desired chapter number to search using [▲ / ▼] or [the Number buttons], then press [ENTER].

Selected chapter playback will start.

If you play the currently recording programme and the playback reaches the scene recorded 1 minute before, the forwarding playback will automatically return to the normal playback.

### 3 Press [STOP ■] once to stop playback.

The resume message will appear.



To stop recording, press [STOP ■] again.

To cancel the resume, press [STOP ■] again.

#### Note

- Playback image may freeze momentarily using this function. However this does not affect the recording.
- The 2x fast forward playback is not available.
- **This function is available only when you are recording on a DVD-RW disc in VR mode, with the recording speed 4H, 6H or 8H.**
- Only the titles (chapters) in the Original can be selected. You cannot select titles from the title list.
- When you stop the playback after the Timer recording is completed, the unit will be switched to the timer-standby mode if another programme has been set (refer to "Notes for the Timer Recording" on page 28).
- Use DVD-RW disc capable of 2x or 4x speed recording.



## Search

### Title / Chapter Search



#### Using [SKIP ◀◀ / ▶▶] buttons

- 1 During playback, press [SKIP ▶▶] to skip the current title or chapter and move to the next.

The unit moves to the next title or chapter one after another.

To go back to the previous title or chapter, press [SKIP ◀◀] twice in quick successions.

#### Using the [DISPLAY] button

- 1 During playback, press [DISPLAY] to bring up the display menu.
- 2 Select the icon using [◀ / ▶], then press [ENTER].

for the title number is highlighted.

### Title Search

- 3 Enter the desired title number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER].

Title search will start.

#### Note

- Total number of chapters and playback time of the selected title are also displayed.

### Chapter Search

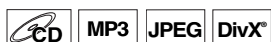
- 3 Press [◀ / ▶] to highlight the number displayed in the right side of the icon.
- 4 Enter the desired chapter number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER].

Chapter search will start.

#### Note

- The title number and playback time of the selected chapter are also displayed.

### Track Search



#### Using [SKIP ◀◀ / ▶▶] buttons

- 1 During playback, press [SKIP ▶▶] to skip the current track and move to the next.

The unit moves to the next track one after another.

To go back to the previous track, press [SKIP ◀◀] twice in quick successions. The unit moves backward one track at a time.

#### Using the [DISPLAY] button

- 1 During playback, press [DISPLAY] to bring up the display menu.  
If the display menu is already shown, skip to step 2.
- 2 Select the icon using [◀ / ▶], then press [ENTER].  
 for the track number is highlighted.
- 3 Enter the desired track number to search for using [▲ / ▼] or [the Number buttons], then press [ENTER].

Track search will start.

#### Note

- During Random playback or Programme playback, you cannot search the desired track.

### Direct Search



You can search the desired track directly.

#### Using [the Number buttons]

- 1 During playback, if the display menu is not displayed, press [the Number buttons] to enter the desired track number.

#### Note

- During Random playback or Programme playback, you cannot search the desired track directly.

### Time Search



#### DivX<sup>®</sup>

- 1 During playback, press [DISPLAY] to bring up the display menu.  
If the display menu is already shown, skip to step 2.
- 2 Select the icon using [◀ / ▶], then press [ENTER].  
 for the title or track number is highlighted.
- 3 Press [◀ / ▶] to highlight .
- 4 Enter the desired time to search for using [▲ / ▼] or [the Number buttons], then press [ENTER].

Time search will start.

#### Note

- During Random playback or Programme playback, you cannot search the desired time.
- The title number and chapter number of the setting time are also displayed.
- Time search function is available only in the same track or title.

# Repeat / Random / Programme Playback / Slide Show

## Repeat Playback



- 1 During playback, press [DISPLAY] to bring up the display menu.

If the display menu is already shown, skip to step 2.

- 2 Select the icon using [◀ / ▶] to display the selection menu.

- 3 Select the desired option to repeat using [▲ / ▼], then press [ENTER].

The selected repeat playback will start.  
The following operations are available.

### Title:

The current title will be played back repeatedly.  
(DVD only)

### Chapter:

The current chapter will be played back repeatedly.  
(DVD only)

### All:

The current disc will be played back repeatedly.  
(DVD-RW (VR mode), audio CD, MP3, JPEG and DivX® only)

### A-B:

The A-B point will be played back repeatedly.  
(DVD, audio CD and DivX® only)

When pressing [ENTER] while A-B is highlighted, A-B repeat is set.

- Press [ENTER] again to decide the starting point (A).
- Press [ENTER] after setting point (A) to select the ending point (B).

### Track:

The current track will be played back repeatedly.  
(audio CD, MP3, JPEG and DivX® only)

### Group:

The current group will be played back repeatedly.  
(MP3, JPEG and DivX® only)

### Note

- To cancel the repeat playback, select "OFF" at step 3. The repeat setting is also cancelled when you stop playback.
- Point B for the repeat A-B playback should be set within the same title or track as point B.
- You cannot select "Group" during the random playback of MP3 and JPEG files.
- Chapter / Track repeat will be cancelled whenever a Chapter / Track is skipped forward or backward.
- For some DivX® files, A-B Repeat playback may not function.

## Random Playback



You can use this function to play back a disc randomly instead of in the recorded order.

- 1 In stop mode, press [SETUP].
- 2 Select "DISC Playback Mode" or "USB Playback Mode" using [▲ / ▼], then press [ENTER].

"DISC Playback Mode" or "USB Playback Mode" menu will appear.

- 3 **Audio CD:**

Select "Random Play" using [▲ / ▼], then press [ENTER].

### MP3 files:

Select "Music" using [▲ / ▼], then press [ENTER] twice.

### JPEG files:

Select "Photo" using [▲ / ▼], then press [ENTER], and select "Random Play" using [▲ / ▼], then press [ENTER].

Random playback will start.

### Note

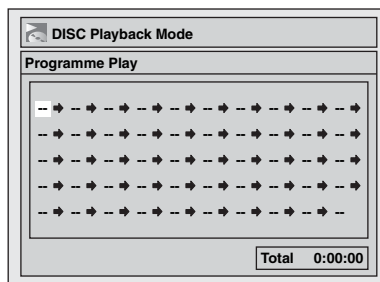
- To cancel random playback, press [STOP ■] twice during random playback. "OFF" appears on the screen.
- During random playback, if you forward the track to the end, the playback speed of the next track will be normal.
- During random playback, you cannot use the search function except for the search with [SKIP ◀◀ / ▶▶]. By pressing [SKIP ◀◀], you can return only to the beginning of the current track.

## Programme Playback



You can programme the disc to play back in your desired order.

- 1 Follow steps 1 to 2 in "Random Playback" on page 44.
- 2 Select "Programme Play" using [▲ / ▼], then press [ENTER].
- 3 Select the desired track using [▲ / ▼], then press [ENTER] or [▶].



- 4 Press [PLAY ▶] to start programme playback.



#### Note

- To erase tracks you selected, press [CLEAR].
- You can make up to 50 track settings.
- To cancel programme playback, press [STOP ■] twice during programme playback. "OFF" appears on the screen.
- You may also select the desired track using [the Number buttons] at step 3.
- During programme playback, if you forward the track to the end, the playback speed of the next track will be normal.
- During programme playback, you cannot use the search function except for the search with [SKIP ◀◀ / ▶▶].

## Slide Show

#### JPEG

You can select the display time between 5 seconds and 10 seconds.

- 1 Follow steps 1 to 2 in "Random Playback" on page 44.
- 2 Select "Photo" using [▲ / ▼], then press [ENTER].
- 3 Select "Slide Show" using [▲ / ▼], then press [ENTER].
- 4 Select the display time using [▲ / ▼], then press [ENTER].
- 5 Press [SETUP] to exit.

#### Note

- Large-size JPEG files take a few moments to be displayed.

## Selecting the Format of Audio and Video

You can select the format of audio and video to suit the content of the disc you are playing back.

## Switching Subtitles



Many DVD-videos have subtitles in one or more languages. The available languages are usually printed on the disc case. You can switch subtitle languages at any time during playback.

- 1 During playback, press [DISPLAY] to bring up the display menu.

Or press [SUBTITLE] during playback and follow from step 3.

- 2 Select the  icon using [◀ / ▶] to display the selection menu.

- 3 Select the desired subtitle language using [▲ / ▼], then press [ENTER].

Subtitles are displayed in the selected language.

If you select "OFF", subtitles will disappear.

#### Note

- With some discs it is only possible to change the subtitle language from the disc menu. Press [TOP MENU] or [MENU/LIST] to display the disc menu.
- If a 4-digit language code appears in the subtitle menu at step 3, refer to the "Language Code" on page 70.
- For media with DivX® files, the screen only displays the number of subtitle languages.

## Switching Audio Soundtrack



When playing back a DVD-videos recorded with two or more soundtracks (often in different languages), you can switch among them during playback.


When playing back the titles in VR mode DVD-RW discs recorded with bilingual audio, you can switch to main audio (L), sub audio (R) or a combination of both (L / R).

When playing back audio CDs, you can switch among the left, the right channel and stereo.

- 1 During playback, press [DISPLAY] to bring up the display menu.

If the display menu is already shown, skip to step 2.

Or press [AUDIO] during playback and follow from step 3.

- 2 Select the  icon using [◀ / ▶] to display the selection menu.

### 3 Select a desired audio soundtrack or audio channel using [▲ / ▼], then press [ENTER].

With a DVD-video, VR mode DVD-RW, or DivX® files:  
Audio soundtrack will switch.

Example:

English → Spanish → French

If the title contains both main and sub audio, you can further select L (main), R (sub), L/R (mixed of main and sub).

With an audio CD:

The Audio channel will switch.

Example:

L/R → L → R

#### Note

- For some discs, it is only possible to change the soundtrack from the disc menu. Press [TOP MENU] or [MENU/LIST] to display the disc menu.
- When outputting the audio signal from the DIGITAL AUDIO OUT (COAXIAL) or when connected to the Dolby Digital Stream compatible TV with an HDMI cable, you cannot switch to the main audio (L) or sub audio (R) when playing back a title in VR mode DVD-RW with "Dolby Digital" set to "PCM". (See page 58.)

## Switching Virtual Surround System



#### MP3

You can enjoy stereophonic virtual space through your existing 2 channel stereo system.

### 1 During playback, press [DISPLAY] to bring up the display menu.

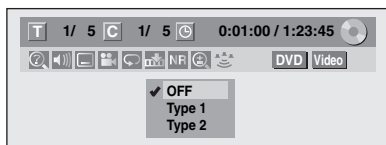
If the display menu is already shown, skip to step 2.

### 2 Select the icon using [◀ / ▶] to display the selection menu.

Virtual Surround menu will appear.

### 3 Select "OFF", "Type 1" or "Type 2" using [▲ / ▼], then press [ENTER].

e.g.) DVD-video



OFF: No effect  
Type 1: Natural effect  
Type 2: Emphasised effect

#### Note

- Select Virtual Surround to "OFF" in case the sound is distorted.
- The setting will be kept "OFF" when the unit is turned off.

## Switching Camera Angles



Some DVD-videos feature scenes shot from two or more angles. The disc case is usually marked with an angle icon if the disc has multi-angle scenes.



### 1 During playback, press [DISPLAY] to bring up the display menu.

The angle icon appears when a switching camera angle is available. (Available only when the angle icon appears in bottom right on the TV screen.)

### 2 Select the icon using [◀ / ▶], then press [ENTER].

The angle will switch each time you press [ENTER].

#### Note

- If the Angle Icon setting is "OFF" in "Setup" menu, the  icon will appear only when the disc is played back and the Display menu appears. (See page 59.)
- Even when the  icon is not displayed, you can select the angle if the currently played back title has at least two multi-angle scenes.

## Reducing Block Noise



### 1 During playback, press [DISPLAY] to bring up the display menu.

### 2 Select the icon using [◀ / ▶] to display the selection menu.

Noise Reduction menu will appear.

### 3 Select the desired option using [▲ / ▼], then press [ENTER].

This function reduces noise in the playback picture. When playing back discs recorded in long time modes such as 6H or 8H, select "Type 1" or "Type 2".

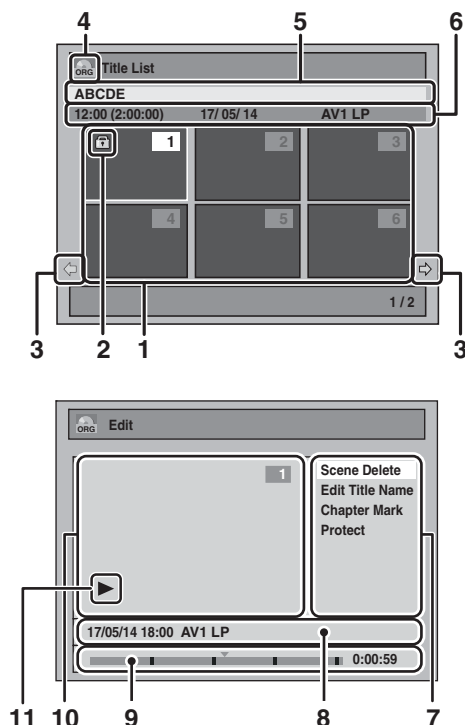
"Type 2" is more effective.





When playing back discs with a little noise, such as DVD-videos, select "OFF"

## Guide to a Title List

Title list allows you to check the titles recorded on the disc easily. You can choose a title to play back from this list and easily edit the titles as you prefer.

**Press [DVD], then press [TOP MENU].**



- 1 Title list: List of titles recorded on the disc. Each title is indicated by its index picture. Index picture for the selected title can be seen in motion. Following icons may be displayed on the index picture.
- 2  : Indicating the title is protected.  
The protect icon, which appears when the title has been protected. (Original titles only)
- 3 Arrow: Indicating there is a previous / next page.
- 4 Title list icon, which indicates a type of the displayed title list.  
 : VR (Original) mode  
 : VR (Playlist) mode  
 : Video mode
- 5 Title name.
- 6 Title information, which displays recorded time, length of the title, date / month / year, recorded CH, and the recording speed.
- 7 Submenu: Submenus for the selected menu are displayed here.
- 8 Title name (editable): If you do not name the title, the recorded date, time, channel, and the recording speed are displayed here.
- 9 Progress bar: Indicating the progress of the playback.
- 10 Preview window: Preview of the selected title is displayed here.
- 11 Playback status: Indicating the current playback status of the selected title.

**Press [RETURN] to exit the title list.**

## Editing Discs

You will find editing discs is easy. This unit offers convenient edit functions.

**You can edit the following from a title list.**

- **Assigning a name to a title**
- **Dividing a title**
- **Combining titles**
- **Adding titles to a Playlist**
- **Setting or releasing the title protection**
- **Adding or deleting chapter marks**
- **Deleting titles or parts of titles**

(Possible editing functions depend on the recording format and editing method.)

### Original and Playlist (VR mode)

For VR mode DVD-RW disc, you can edit the recordings in Playlist without changing the original recordings. Playlist does not take up much disc space.

### What “Original” or “Playlist” is for?

There are 2 types for the title list: Original and Playlist

- **Original** content refers to what's actually recorded on the VR mode DVD-RW disc.
- **Playlist** content refers to the edited version of the VR mode DVD-RW disc; how the Original content is to be played.

### Finalising a Disc

- This will allow a disc that is recorded on this unit to be played back on a different DVD player — without finalisation it will not be playable on another player.
- After finalising a DVD-RW/-R disc, you cannot edit any information that is on that disc.

**Using these editing functions to modify copyrighted content for any purpose other than your private viewing may be prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.**

### Note

- A Playlist is not available for DVD-R or video mode DVD-RW discs.
- It is not possible to edit a disc recorded in another video system other than PAL, such as NTSC.
- After finalising a DVD-RW/-R disc, you cannot edit any information that is on that disc.

## Deleting Titles



You can delete titles you do not want to keep.

When an Original is deleted from VR mode DVD-RW disc, the recordable disc space will increase. Even when a Playlist is deleted, the original of the Playlist will remain, and recordable disc space will not increase.

Recordable disc space of video mode DVD-RW disc will increase when the last title on the title list is deleted. However, deleting the title will not change recordable disc space for DVD-R disc.

In finalised DVD-R or video mode DVD-RW discs, you cannot select the title list because it cannot be edited once finalised.

### Note

- It is not possible to retrieve deleted titles.

**Press [DVD] first.**

### 1 In stop mode, press [TOP MENU].

Title List will appear.

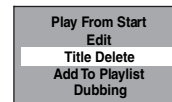
For VR mode DVD-RW disc, press [MENU/LIST] to switch between “Original” and “Playlist”.

### 2 Select the desired title with [▲ / ▼ / ◀ / ▶], then press [ENTER].

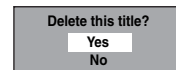
Pop up window will appear.

### 3 Select “Title Delete” using [▲ / ▼], then press [ENTER].

e.g.)VR mode DVD-RW Original



### 4 Select “Yes” using [▲ / ▼], then press [ENTER].



Final confirmation message will appear. Select “Yes” using [▲ / ▼], and then press [ENTER].  
Title is deleted.

### 5 Press [STOP ■] to exit.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

## Editing Title Name



You can edit the title names from this menu.  
The title names you edit will appear on the title list.

Press [DVD] first.

### 1 In stop mode, press [TOP MENU].

Title List will appear.

For VR mode DVD-RW disc, press [MENU/LIST] to switch between "Original" and "Playlist".

### 2 Select the desired title with [▲ / ▼ / ◀ / ▶], then press [ENTER].

Pop up window will appear.

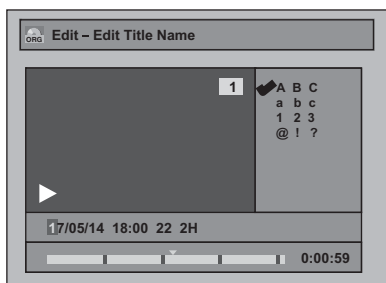
### 3 Select "Edit" with [▲ / ▼], then press [ENTER].

Edit menu will appear.

### 4 Select "Edit Title Name" using [▲ / ▼], then press [ENTER].

A window for entering the title name will appear.

### 5 To enter the title name, refer to "Guide to Editing Title Names" on page 49.



When you finish entering the title name, press [ENTER].

### 6 Select "Yes" using [▲ / ▼], then press [ENTER].

The name you edited becomes the title.

### 7 Press [RETURN] repeatedly to exit.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

## Guide to Editing Title Names

**Step 1** : Select the desired character set using [▲ / ▼], then press [ENTER].

**Step 2** : Using the list below as a guide, press [the Number buttons] repeatedly until the desired letter appears.

Select Press	ABC	abc	123	@ ! ?
[0]	<space>	<space>	0	<space>
[1]	-	-	1	! " # \$ % & ' ( ) * + , - . / : ; < = > ? @ [ ] ^ _ {   }
[2]	ABC	abc	2	-
[3]	DEF	def	3	-
[4]	GHI	ghi	4	-
[5]	JKL	jkl	5	-
[6]	MNO	mno	6	-
[7]	PQRS	pqrs	7	-
[8]	TUV	tuv	8	-
[9]	WXYZ	wxyz	9	-

- Characters set will be changed to the "@!?" automatically if you press [1] after you selected the "ABC" or "abc" mode.

### Note

- To delete letters, press [CLEAR] repeatedly. Press and hold [CLEAR] to delete all letters.
- Press [◀ / ▶] to move the cursor to the left or right.
- You can enter up to 30 letters.
- Unrecognisable characters will be replaced with asterisks (\*). If you delete them, adjoining characters may change to asterisks (\*) or other.

## Adding or Deleting Chapter Markers Manually



You can add chapter marks to a title. After a title is marked with chapters, you can use the chapter search feature.  
You can set a chapter mark anywhere you want.

Press [DVD] first.

### 1 Follow the steps 1 to 3 in "Editing Title Name" on this page.

### 2 Select "Chapter Mark" using [▲ / ▼], then press [ENTER].

### 3 Use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE II] to find where you want to create a new chapter mark. Or, use [SKIP ◀◀ / ▶▶] to find a chapter mark that you want to delete.

#### 4 Select “Add” or “Delete” accordingly using [▲ / ▼], then press [ENTER].

You cannot delete the first chapter of a title.

#### 5 Select “Yes” using [▲ / ▼], then press [ENTER].

##### Adding a chapter mark:

If you select “Add” at step 4, a new chapter mark is created at the point you specified.

##### Deleting a chapter mark:

If you select “Delete” at step 4, the chapter mark you selected is deleted.

#### 6 Press [RETURN] repeatedly to exit.

For DVD, the data will be written onto the disc momentarily.

**This operation may take awhile to be completed.**

#### Note

- Maximum numbers of chapter for each media:  
VR mode DVD : 999 chapters per entire Playlist and Original  
Besides the mentioned above, the number of chapters may be different according to the recording time.
- Only with regard to DVD editing, you may not be able to add chapter marks depending on the duration of the title or the number of chapters.
- Only with regard to DVD editing, remaining time of the disc may decrease when adding chapter marks or increase when clearing chapter marks depending on the recording time or edited contents.

### Adding or Deleting Chapter Marks at once for Video Mode DVD-RW disc



For titles in video mode DVD-RW disc, you can set or edit chapter at every selected time interval at once. You can also clear all the chapter marks at once. You can only specify the interval of chapter marks that last for more than 5 minutes.

Press [DVD] first.

- Follow the steps 1 to 3 in “Editing Title Name” on page 49.
- Select “Chapter Mark” using [▲ / ▼], then press [ENTER].
- Select the desired interval using [▲ / ▼], then press [ENTER].
- Select “Yes” using [▲ / ▼], then press [ENTER].  
Chapter marks are added.  
If you select “OFF” at step 3, all the chapter marks are erased.
- Press [RETURN] repeatedly to exit.  
Writing onto the disc starts.  
It may take awhile to write the data on a disc.

#### Note

- You cannot select the chapter mark the title of which is less than 5 minutes.
- You cannot select a chapter mark interval that exceeds the length of a title.
- The length of chapters may slightly deviate from the one specified at the step 3.
- A chapter mark may be delayed depending on the recording content.
- Maximum number of chapter for video mode DVD is 99 chapters per disc and title.

### Protecting Titles



To prevent the accidental editing or erasing of the titles, you can protect them in the Original menu.

Press [DVD] first.

- Follow the steps 1 to 3 in “Editing Title Name” on page 49.
- Select “Protect” using [▲ / ▼], then press [ENTER].
- Press [ENTER] again.  
Writing onto the disc starts.  
It may take awhile to write the data on a disc.
  - If the title is already protected, “ON → OFF” will appear instead. Press [ENTER], to release the title from protection.
  - The protected title will be marked with icon.
- Press [RETURN] repeatedly to exit.  
Writing onto the disc starts.  
It may take awhile to write the data on a disc.  
**To protect a whole disc:**  
Select “Disc Protect OFF → ON” from “DVD Menu”, then select “Yes”. Refer to “Setting a Disc to Protect” on page 33.

### Dividing a Title



You can divide a title into two new titles.

Press [DVD] first.

- Follow steps 1 to 3 in “Editing Title Name” on page 49.
- Use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE II] to find where you want to divide the title.
- Select “Title Dividing” using [▲ / ▼], then press [ENTER].

#### 4 Select “Yes” using [▲ / ▼], then press [ENTER].

The title is divided into two new titles with the same title names.

#### 5 Press [RETURN] to exit.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

#### Note

- You cannot divide a title of the disc when the number of recording titles reaches the maximum of 99 (-RW), or the number of recording chapters reaches the maximum of 999 (-RW).

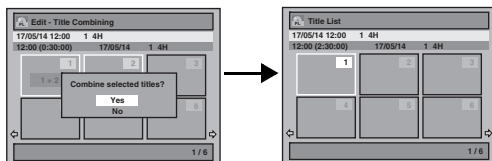
## Combining Titles



You can combine two titles into a single title.

Press [DVD] first.

- 1 Follow steps 1 to 3 in “Editing Title Name” on page 49.
- 2 Select “Title Combining” using [▲ / ▼], then press [ENTER].
- 3 Select another title to combine using [▲ / ▼ / ◀ / ▶], then press [ENTER].
- 4 Select “Yes” using [▲ / ▼], then press [ENTER].  
The two titles will combine into a single title.



#### 5 Press [RETURN] to exit.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

#### Note

- You cannot select the same title twice and combine it into a single title.
- If either one of the two original titles is deleted, the combined new title is also deleted.

## Adding Titles to a Playlist



For VR mode DVD-RW disc, you can add a title to the Playlist as you want.

Press [DVD] first.

- 1 Follow the steps 1 to 2 in “Deleting Titles” on page 48.
- 2 Select “Add To Playlist” using [▲ / ▼], then press [ENTER].



#### 3 Select “Yes” using [▲ / ▼], then press [ENTER].

The title is added to Playlist.

#### 4 Press [RETURN] to exit.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

#### Note

- To delete a title from the Playlist, refer to “Deleting Titles” on page 48.
- When the number of the Playlist reaches its maximum (refer to page 22), or when the number of the total chapter marks of the Playlists reaches 999, “Add To Playlist” cannot be selected.

## Deleting All Playlists

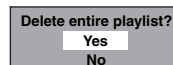


All Playlists can be deleted if it is no longer needed.

- 1 Press [SETUP].
- 2 Select “DVD Menu” using [▲ / ▼], then press [ENTER].
- 3 Select “Delete All Playlists” using [▲ / ▼], then press [ENTER].



#### 4 Select “Yes” using [▲ / ▼], then press [ENTER].



“Are you sure?” will appear. Select “Yes” using [▲ / ▼], and then press [ENTER].

Playlist is deleted.

Writing onto the disc starts.

It may take awhile to write the data on a disc.

#### Note

- Deleting a Playlist will not increase the available recording time on the disc.

## Deleting Parts of Titles



You can delete a specific part of a title.

Even when a title is deleted from the Playlist, the original title will remain as it is.

Press [DVD] first.

- 1 Follow the steps 1 to 3 in “Editing Title Name” on page 49.**
- 2 Select “Scene Delete” using [▲ / ▼], then press [ENTER].**
- 3 Use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ||] to find the start point, then press [ENTER].**

**Then use [SKIP ◀◀ / ▶▶], [REV ◀◀], [FWD ▶▶], [PLAY ▶] and [PAUSE ||] again to move to the end point, and press [ENTER].**

The cursor will move to “Preview”.

The bar at the bottom of the screen indicates the total and the elapsed time of the title, and the area selected for deletion is indicated in red.

You can check the preview by pressing [ENTER].

- Before and after 5 seconds of the deleted point will be playback for preview.

- 4 Select “Delete” using [▲ / ▼], then press [ENTER].**
- 5 Select “Yes” using [▲ / ▼], then press [ENTER].**  
“Are you sure?” will appear. Select “Yes” using [▲ / ▼], and then press [ENTER].  
The part of the title is deleted.
- 6 Press [RETURN] repeatedly to exit.**  
Writing onto the disc starts.  
It may take awhile to write the data on a disc.

### Note

- You cannot select “Scene Delete” if the number of chapter marks in the Original or Playlist is 999. (Depends on the content, there is a case that you cannot select “Scene Delete” before the number of chapter marks reaches 999.)
- The recordable disc space will not increase after deleting parts of titles on a Playlist.
- When a scene is deleted from an Original, the related title on the Playlist will also be deleted automatically.



# Function Setup

The following table is the contents which you can set and the default settings.  
Refer to the following table for useful operation.

Setup	Items (highlight is the default)		Contents
General Setting	Playback	Parental Lock ▶ Page 57	OFF level 1 to 8 Set the parental level for DVD disc playback.
	Audio Out ▶ Pages 57-58	Dynamic Range Control	ON OFF Compressing the range of sound volume.
		PCM	48kHz 96kHz Set whether the sound recorded in 96kHz will be down sampled to 48kHz.
		Dolby Digital	PCM Stream Set whether to convert Dolby Digital into PCM or to output Dolby Digital signals.
		MPEG	PCM Stream Set whether to convert MPEG into PCM or to output MPEG signals.
		DTS	ON OFF Set whether DTS signal is output or not.
		MP3 Surround	PCM Stream Set the type of MP3 signal to output.
	Disc Menu Language ▶ Page 58	English Bulgarian Czech Dutch French German Hungarian Italian Polish Romanian Russian Slovak Spanish Other	Set the language for Disc Menu.
	Audio Language ▶ Page 58	Original English Bulgarian Czech Dutch French German Hungarian Italian Polish Romanian Russian Slovak Spanish Other	Set the language for audio.
	Subtitle Language ▶ Page 58	OFF English Bulgarian Czech Dutch French German Hungarian Italian Polish Romanian Russian Slovak Spanish Other	Set the language for subtitles.
	Angle Icon ▶ Page 59	ON OFF	Set whether or not to display the angle icon.
	Still Mode ▶ Page 59	Auto Field Frame	Set the type of still image in pausing playback.
	TV System ▶ Page 59	PAL Auto	Set the TV system.

Setup		Items (highlight is the default)	Contents	
General Setting	Display	OSD Language ➡ Page 59	English Български Česky Nederlands Français Deutsch Magyar Italiano Polski Romana Русский Slovenský Español	Set the language for OSD (on-screen display).
		Auto Power Off ➡ Page 59	ON OFF	Set for the auto power off function to turn off the unit automatically when the unit has been inactive for 3 hours.
		Screen Saver ➡ Page 59	OFF 1 minute 5 minutes 10 minutes 15 minutes	Set the idling time before the screen saver starts.
		FL Dimmer ➡ Page 59	Bright Dark	Set the brightness of the front panel display.
	Video	TV Aspect ➡ Page 60	4:3 Letter Box 4:3 Pan & Scan 16:9 Wide	Set a picture size according to aspect ratio of your TV.
		Video Out ➡ Page 60	SCART (RGB) Component (Progressive) Component (Interlace)	Sets the video output mode.
	Recording	Auto Chapter ➡ Page 23	OFF 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks periodically.
		Recording Audio Select (1H) ➡ Page 24	PCM Dolby Digital	Set the recording audio type. (Only when the recording speed is set to "1H".)
		Auto Finalise ➡ Page 34	ON OFF	Set the unit to finalise the disc automatically.
		Aspect Ratio (Video mode) ➡ Page 23	Auto 4:3 16:9	Set a aspect ratio for video mode recording.
		Dubbing Mode ➡ Page 32	VCR ➡ DVD DVD ➡ VCR	Set the dubbing selection.
		Bilingual Recording Audio ➡ Page 24	Main Sub	Set the audio type for recording.
		External Input Audio ➡ Page 24	Stereo Bilingual	Set the external input audio type for recording.
		Video Colour System ➡ Page 30	Auto  PAL SECAM	Set the video colour system to "PAL" or "SECAM" automatically. Set the video colour system to "PAL". Set the video colour system to "SECAM".
	Clock ➡ Page 61			Set the clock manually.

Setup		Items (highlight is the default)		Contents
General Setting	DivX	DivX® VOD ➡ Pages 38, 61	Registration Code	This menu item provides you with the DivX® VOD registration code. The DivX® registration code is required when downloading the DivX® VOD files from the Internet. To learn more about DivX® VOD, visit <a href="http://www.divx.com/vod">www.divx.com/vod</a> .
			Deactivation Code	This menu item provides you with the DivX® VOD deactivation code. The DivX® deactivation code is required when re-downloading the DivX® VOD files from the Internet after deactivating. To learn more about DivX® VOD, visit <a href="http://www.divx.com/vod">www.divx.com/vod</a> .
			Deactivation	Yes No
		DivX Subtitle ➡ Pages 37, 61	OFF English Czech Dutch French German Hungarian Italian Polish Romanian Russian1 Russian2 Slovak Spanish Swedish	Set the language for DivX® Subtitle.
	HDMI	Format ➡ Page 61	RGB YCbCr	Set the colour space for the HDMI output.
		HDMI Audio ➡ Page 61	ON OFF	Set whether to output the HDMI audio signal or not.
		RGB Range ➡ Page 61	Normal Enhanced	Set the black-white contrast level for HDMI RGB output.
	Reset All ➡ Page 61			Set to the default setting.

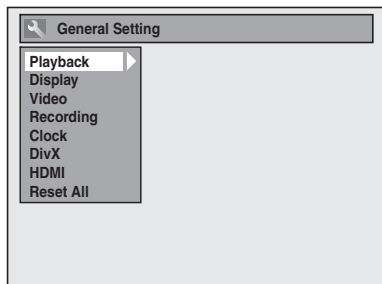
#### Note

- Your change to each settings stays on even when the power is switched off.
- An item which is not currently available is greyed in the settings.

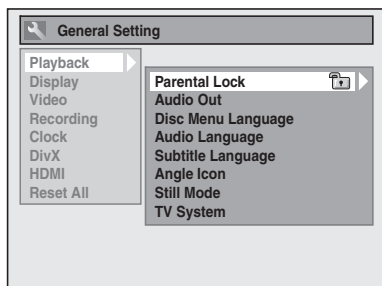
## General Setting

### Common Procedures

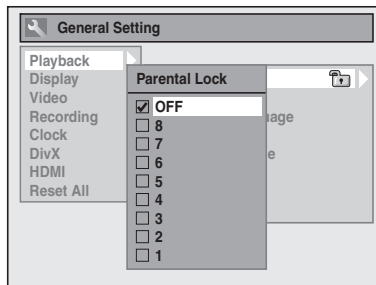
- 1 In stop mode, press [SETUP].
- 2 Select “General Setting” using [▲ / ▼], then press [ENTER].
- 3 Select a desired setup using [▲ / ▼], then press [ENTER].



- 4 Select a desired item using [▲ / ▼], then press [ENTER].  
e.g.) Playback setup



- 5 Select a desired setting using [▲ / ▼], then press [ENTER].  
e.g.) Parental Lock item



Your setting is activated.

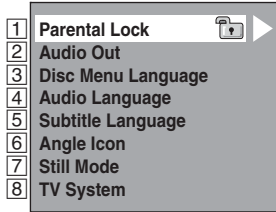
- 6 When you finish the setting, press [SETUP] to exit.

To return to the previous screen

Press [RETURN].

## Playback

Setup → General Setting → Playback

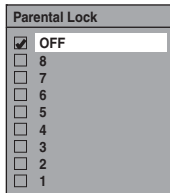


### 1 Parental Lock (Default: OFF) (DVD only)

Set "Parental Lock" level.

**Change "Parental Lock" level using [▲ / ▼], then press [ENTER].**

Proceed to either of the following steps.



#### Parental level

OFF : All parental locks are cancelled.

8 : DVD software of any grade (adult / general / children) can be played back.

7 to 2 : Only DVD software intended for general use and children can be played back.

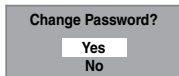
1 : Only DVD software intended for children can be played back.

#### Note

- "Parental Lock" function may not be available on some discs.
- It may be difficult to determine if some DVDs support the parental lock function. Be sure to confirm that "Parental Lock" function operates in the way that you have set.
- Record the password in case you forget it.

### A password is not yet set

**1 Select "Yes" using [▲ / ▼], then press [ENTER].**



**2 Enter a new password using [the Number buttons], then press [ENTER].**



Your setting is activated.

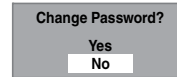
If you select "No", press [SETUP] to exit.

### A password is already set

**1 Enter the current password using [the Number buttons].**

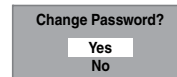


**2-A Select "No" using [▲ / ▼], then press [ENTER].**



"Parental Lock" level is activated.

**2-B Select "Yes" using [▲ / ▼], then press [ENTER].**



**Enter a new password using [the Number buttons], then press [ENTER].**



Your setting is activated.

(You can change both password and "Parental Lock" level.)

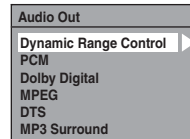
#### Note

- Press [CLEAR] to erase numbers entered incorrectly.
- If you forget your password or you want to clear all settings in "Parental Lock", enter [4], [7], [3], [7] using [the Number buttons] at the option window. Your password is cleared and parental levels are set to "OFF".

### 2 Audio Out

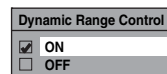
Choose the appropriate audio setting for your external device.

**It will only affect a disc playback.**



#### Dynamic Range Control (Default: ON) (DVD only)

Set to "ON" to make the dynamic range narrower.

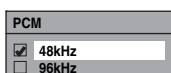


"Dynamic Range Control" function is effective only with analogue audio connection.

#### Note

- "Dynamic Range Control" function is available only on discs recorded in the Dolby Digital format.

## PCM sampling (Default: 48kHz)



PCM

☒ 48kHz

☐ 96kHz

**48kHz** : If your amplifier / decoder is NOT compatible with 96 kHz PCM, select "48kHz". Sound recorded at 96 kHz is down sampled to 48 kHz.

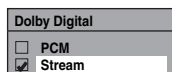
**96kHz** : If your amplifier / decoder is compatible with 96 kHz PCM, select "96kHz". Sound is sampled at 96 kHz.

### Note

When playing back a disc with copyright protection:

- Even if you select "96kHz", the sound is down sampled to 48 kHz.

## Dolby Digital conversion (Default: Stream)



Dolby Digital

☐ PCM

☒ Stream

**PCM** : Converts the Dolby Digital into PCM (2 channel).

If your amplifier / decoder is NOT compatible with Dolby Digital, set to "PCM".

**Stream** : Outputs Dolby Digital signals.

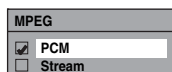
If your amplifier / decoder is compatible with Dolby Digital, set to "Stream".

### Note

When playing back a DVD-RW disc recorded in VR mode:

- If the audio source on a disc is in Dolby Digital format, set "Dolby Digital" to "PCM" so that you can switch to main audio (L), sub audio (R), or a combination of both (L / R) using your amplifier / decoder.

## Settings for MPEG (Default: PCM) (DVD only)



MPEG

☒ PCM

☐ Stream

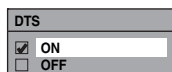
**PCM** : Converts MPEG into PCM.

If your amplifier / decoder is NOT compatible with MPEG, set to "PCM".

**Stream** : Outputs MPEG Audio signals.

If your amplifier / decoder is compatible with MPEG, set to "Stream".

## Settings for DTS (Default: ON) (DVD only)



DTS

☒ ON

☐ OFF

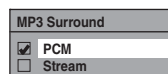
**ON** : Outputs DTS signals.

If your amplifier / decoder is compatible with DTS®, set to "ON".

**OFF** : No DTS signal is output.

If your amplifier / decoder is NOT compatible with DTS®, set to "OFF".

## Settings for MP3 Surround (Default: PCM)



MP3 Surround

☒ PCM

☐ Stream

**PCM** : Outputs all the MP3 files in stereo.

**Stream** : Outputs MP3 files in Stream.

### Note

- Set to "Stream" when this unit is connected to an amplifier for MP3 Surround.

## 3 Disc Menu Language (Default: French) (DVD only)

Set "Disc Menu Language".



Disc Menu Language

☐ English

☐ Bulgarian

☐ Czech

☐ Dutch

☒ French

☐ German

☐ Hungarian

☐ Italian

## 4 Audio Language (Default: Original) (DVD only)

Set "Audio Language".



Audio Language

☒ Original

☐ English

☐ Bulgarian

☐ Czech

☐ Dutch

☐ French

☐ German

☐ Hungarian

### Note

- If "Original" is selected, the audio language is the default of the inserted disc.
- "Audio Language" setting may not be available for some discs.

## 5 Subtitle Language (Default: OFF) (DVD only)

Set "Subtitle Language".



Subtitle Language

☒ OFF

☐ English

☐ Bulgarian

☐ Czech

☐ Dutch

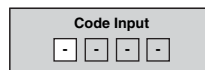
☐ French

☐ German

☐ Hungarian

If "Other" is selected, enter the appropriate 4-digit code using [the Number buttons].

Refer to "Language Code" on page 70.



Code Input

- - - -

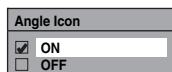
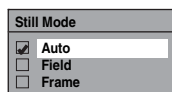
When you finish entering the code, press [ENTER].

**Note**

- You can also change or switch off the subtitles on a DVD from the disc menu if it is available.
- Press **[CLEAR]** or **[◀]** to erase numbers entered incorrectly.
- You can only select the languages supported by the inserted disc.

**6 Angle Icon (Default: ON) (DVD only)**

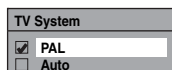
Set to "ON" to show the angle icon during the playback.

**7 Still Mode (Default: Auto) (DVD only)**

- Auto** : Automatically select the best resolution setting ("Frame" or "Field") based on the data characteristics of the pictures.
- Field** : Select "Field" when the pictures are still unstable even if "Auto" is selected. "Field" stabilises the pictures, although the picture quality may become coarse due to the limited amount of data.
- Frame** : Select "Frame" to display relatively motionless pictures in higher resolution. "Frame" improves the picture quality, although it may unstabilise the pictures due to simultaneous output of two Field data.

**Note**

- An individual picture on TV screen is called as Frame, which consists of two separate images called as Field. Some pictures may be blurred at the "Auto" setting in still mode due to their data characteristics.

**8 TV System (Default: PAL) (DVD only)**

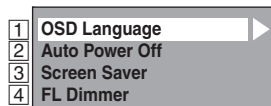
- PAL** : Outputs a modified PAL signal for viewing discs recorded with the NTSC system on a PAL system TV.
- Auto** : Changes the video system (PAL / NTSC) automatically according to the format of the inserted disc.

**Note**

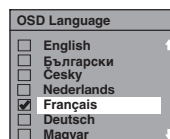
- With discs recorded using the PAL system, a PAL signal is output for viewing on a PAL system TV.
- Discs recorded with the PAL system cannot be viewed on an NTSC system TV.
- With discs recorded using the NTSC system, an NTSC signal is output for viewing on an NTSC or Multi system TV.
- With discs recorded using the NTSC system, select PAL to view on a PAL system TV.

**Display**

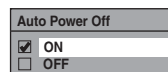
Setup → General Setting → Display

**1 OSD Language (Default: French)**

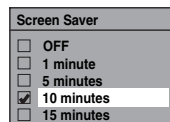
Set the OSD language.

**2 Auto Power Off (Default: ON)**

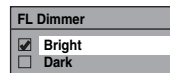
Set for the auto power off function. When this function is set to "ON" and this unit has been inactive for 3 hours, a confirmation message will be displayed 3 minutes before the unit is automatically turned off.

**3 Screen Saver (Default: 10 minutes)**

Set the screen saver time delay.

**4 FL Dimmer (Default: Bright)**

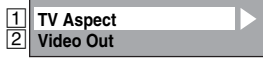
Set the front panel display brightness.

**Note**

- The display will not light up when the unit is in standby mode. **This is a Power Saving mode (ECO) for standby.**

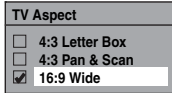
## Video

Setup → General Setting → Video



### 1 TV Aspect (Default: 16:9 Wide)

Use this feature to adjust the aspect ratio of the video source which is different from your TV's ratio to fit your TV monitor without distorting the picture.



#### If you have a standard TV:

Select "4:3 Letter Box", so that black bars appear on the top and bottom of the TV screen when playing back a wide-screen picture. Select "4:3 Pan & Scan" for a full height picture with both sides trimmed when playing back wide-screen picture.

#### If you have a widescreen TV:

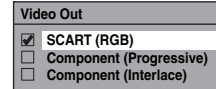
Select "16:9 Wide".

### 2 Video Out (Default: SCART (RGB))

This unit is compatible with the Progressive Scan System. The feature provides you with the higher definition images than the traditional output system does. You can enjoy Progressive Scan image by using HDMI OUT or COMPONENT VIDEO OUT. To utilise the Progressive Scan system through the COMPONENT VIDEO OUT, you must set video output mode in "Setup" menu by following the steps. "SCART (RGB)" is selected as the default.

- When you set "Video Out" setting, you need a Scart cable or an HDMI cable to output from this unit with component video cable.

**1 Select the desired setting using [▲ / ▼], then press [ENTER].**



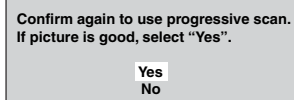
- If your TV is compatible with progressive scanning (576p/480p), connect the TV to the COMPONENT VIDEO OUT jacks of this unit and select "Component (Progressive)" and set your TV to the progressive scan mode.
- If your TV is not compatible with progressive scan, select "Component (Interlace)" for component connection, or select "SCART (RGB)" for Scart cable connection.
- Refer to page 17 for more details.

Only if you select the "Component (Progressive)", proceed to step 2. If you select "Component (Interlace)" or "SCART (RGB)", your setting is activated.

**2 Select "Yes" using [◀ / ▶], then press [ENTER].**

Final confirmation window will appear.

**3 Select "Yes" using [▲ / ▼], then press [ENTER] within 15 seconds.**



Your setting is activated.

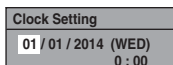
#### Note

- When changing "Video Out" setting ("SCART (RGB)", "Component (Progressive)" or "Component (Interlace)"), connect to the corresponding jack on the TV. If the setting is changed, for example, to "SCART (RGB)" while the COMPONENT VIDEO OUT jacks are used to connect to the TV, a distorted video signal may be output.



## Clock

Setup → General Setting → Clock



### 1 Enter the date (day / month / year) using [▲ / ▼].

Press [▶] to move the cursor to the next field. If you want to go back to the previous field, press [◀].

### 2 Enter the time (hours / minutes) using [▲ / ▼], then press [ENTER].

The clock will start.

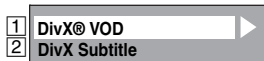
- Although seconds are not displayed, they will be counted from zero.

#### Note

- Your clock setting will be lost if either there is a power failure or the unit is unplugged for more than 30 seconds.
- The clock is not displayed in standby mode because the unit will return to a new Power Saving mode (ECO) with the display off.

## DivX®

Setup → General Setting → DivX



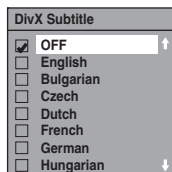
### 1 DivX® VOD

Provides DivX® VOD registration code and deactivation code.

Refer to page 38 for more details.

### 2 DivX Subtitle (Default: OFF)

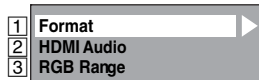
Set the DivX® subtitle.



## HDMI

Setup → General Setting → HDMI

- Make sure that the HDMI cable is connected and the TV input is set to HDMI.

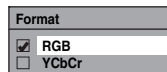


### 1 Format (Default: RGB)

You can select the colour space for HDMI output.

Set the appropriate colour space for your display device.

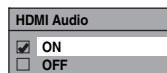
- When the connected device is not compatible with the Y/Cb/Cr, HDMI signal is output as RGB regardless of the setting.



### 2 HDMI Audio (Default: ON)

If you do not want to output the audio through HDMI (when you digitally output the audio through the DIGITAL AUDIO OUT (COAXIAL) jack to your audio system, etc.), you can set the HDMI audio output off.

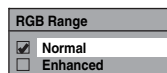
- Set to "OFF" when the HDMI sound is not required.



### 3 RGB Range (Default: Normal)

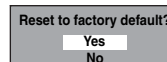
You can adjust the RGB range to make the dark areas of the HDMI images brighter.

- Select "Enhanced" if the black-white contrast is not clear.
- This setting is effective only for HDMI RGB output.



## Reset All

Select "Yes" using [▲ / ▼], then press [ENTER].



"Are you sure?" will appear. Select "Yes" using [▲ / ▼], and then press [ENTER].

#### Note

- The settings listed below will remain unchanged even after resetting to the factory default.
  - Clock setting
  - Parental lock setting
  - DivX® VOD code
  - Timer programmes
  - OSD language setting

# VCR Functions

## Common Procedures

### 1 Press [STANDBY-ON To play back a tape, turn on the TV and be sure to select the input to which the unit is connected.

### 2 Press [VCR].

## Playback



### Note for HDMI, Component and Digital Audio (COAXIAL) Output in VCR Playback

This unit can be output with HDMI, Component and Digital Audio (COAXIAL) in VCR playback. However, the image and the sound of VCR cannot be output at the following condition.

- When switching to the VCR mode while recording in the DVD mode.
- When selecting the DV channel (AV3).
- During DVD to VCR dubbing.

### Playing back a Tape

#### 1 Insert a pre-recorded tape, then press [PLAY ►] to begin playback.

#### 2 During playback, press [PAUSE II].

Playback will be paused and sound will be muted.

#### 3 Press [PLAY ►] to resume playback.

#### 4 Press [STOP ■] to stop playback.

#### 5 Press [OPEN/CLOSE EJECT ▲] to eject the tape.

#### Note

- When a tape without record tab is inserted, the unit will start playback automatically.
- Tracking will be automatically adjusted upon playback. To adjust the tracking manually, press [AUX ^ / v].

## Basic Recording and One-touch Timer Recording (OTR)



### Before recording, make sure:

- The desired channel is selected by pressing [the Number buttons] or [AUX ^ / v] on the remote control.
- There is a tape with a record tab in the unit.

Tape speed		Recording / Playback Time			
	Type of tape	E60	E120	E180	E240
	SP (standard play) mode	1 hour	2 hours	3 hours	4 hours
	LP (long play) mode	2 hours	4 hours	6 hours	8 hours

#### 1 Insert a recordable videotape.

#### 2 Select the recording speed using [REC SPEED].

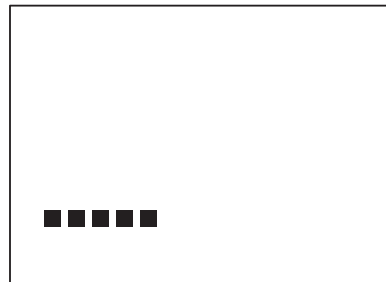
- The desired recording speed is selected in SP or LP mode by pressing [REC SPEED].

#### 3 Select the desired channel to record using [AUX ^ / v] or [the Number buttons].

#### 4 Basic Recording:

##### Press [REC] to start recording.

To temporarily stop recording or to resume it, press [PAUSE II].

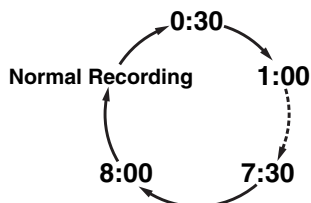


After the unit has been in pause mode for 5 minutes, it will stop automatically to protect the tape and the video head from damage.

### One-touch Timer Recording:

Press [REC] repeatedly until the desired recording time (30 minutes to 8 hours) appears on the TV screen.

One-touch Timer Recording will start.



- When the unit reaches the specified time, it will be turned off automatically.
- To change the recording length during One-touch Timer Recording, press [REC] repeatedly until desired length appears.
- To cancel One-touch Timer Recording within the specified time, press [STOP ■].

#### Note

- The remaining recording time will appear on the TV screen during One-touch Timer Recording. Press [DISPLAY] to see it on the TV screen.
- If VCR One-touch Timer Recording is completed during DVD playback or recording, the VCR will be in stop mode and the DVD keeps the current mode.
- You cannot use the pause function during One-touch Timer Recording.
- When One-touch Timer Recording is finished and the power is turned off, the unit will switch to the timer-standby mode automatically if a timer recording has been programmed. Press [TIMER SET] to cancel the timer-standby mode in order to use the unit continuously.

- 5 Press [STOP ■] when the recording is completed.

### Prevent accidental erasure

To prevent accidental recording on a recorded cassette, remove its record tab. To record on it later, cover the hole with cellophane tape.



### DVC to VCR Dubbing



This function helps you to dub the contents in the DVC (digital video camcorder) to VCR.

#### Preparing for DV dubbing (DVC to VCR):

- Insert a recordable videotape.
  - Make sure your DVC is in video mode.
- 1 Press [AUX ^ / ∨] repeatedly to select DV(AV3).
  - 2 Select the recording speed using [REC SPEED]. (See page 62.)

- 3 Stop or pause the DVC where you want to start dubbing.

- 4 Play back the DVC.

- 5 Press [REC].

The dubbing will start.

#### Note

- Dubbing will start from where the tape is stopped.

## Search

### Index Search



- 1 Press [SEARCH] so that the index search menu appears.
- 2 Enter the number of recordings you want to skip using [the Number buttons] within 30 seconds.
- 3 Press [FWD ►►] or [REV ◄◄] to start index search.

If you want to go in the forward direction, press [FWD ►►].

If you want to go in the reverse direction, press [REV ◄◄]. After index search, the VCR will play back the tape automatically.

#### Note

- This function is not available during recording.
- Every time a tape is recorded, an index mark is written on the tape.
- You can make the index mark up to 20.

### Time Search



This feature allows you to go to a specific point on a tape by entering the exact amount of time you want to skip in order to reach the point.

- 1 Press [SEARCH] repeatedly until the time search menu appears.
- 2 Enter your desired time to skip using [the Number buttons] within 30 seconds.
- 3 Press [FWD ►►] or [REV ◄◄] to start time search.

If you want to go in the forward direction, press [FWD ►►].

If you want to go in the reverse direction, press [REV ◄◄]. After index search, the unit will play back the tape automatically.

#### Note

- This function is not available during recording.
- Press [STOP ■] to stop the search.
- If the tape reaches the end during the search, this unit will cancel it and rewind the tape.
- You can set the time up to 9:59 (9h. 59min.).

## Other Operations



### To cue or review picture during playback (Picture Search):

Press **[FWD ►►]** or **[REV ◄◄]** during playback.  
Press it again and the unit will search in super high speed (in the LP mode only).

### To freeze the picture on TV screen during playback (Still mode):

Press **[PAUSE II]**. Each time you press the button, the picture will be forwarded frame by frame.  
If the picture begins to vibrate vertically during the still mode, stabilise the picture by pressing the **[AUX ▲ / ▼]**. If the picture is distorted or rolling vertically, adjust the vertical hold control on your TV, if equipped.

### To reset the tape counter:

Press **[CLEAR]**.

### To play back in slow forward motion:

During playback, press **[PAUSE II]**, then press **[FWD ►►]**.  
If the noise bars appear on the TV screen, you can reduce it by pressing **[AUX ▲ / ▼]**. Slow reverse is not available in VCR mode.

#### Note

- Still / Slow / Pause mode will be automatically cancelled after 5 minutes to prevent damage to the tape and the video head.
- To return to normal play back from the Picture Search / Still / Slow mode, press **[PLAY ►]**.

## Changing the Video Colour System

This unit will distinguish the video colour system (SECAM, PAL or MESECAM) automatically according to the format of a pre-recorded video tape during playback or the input signal from the external devices.

To change the video colour system manually, press **[SYSTEM]**.

Each time you press **[SYSTEM]**, the colour system will change as follows.

→ **AUTO → SECAM → PAL → MESECAM** →

#### Note

- If the playback picture on the TV screen is black and white, change the video colour system manually.
- When you change the video colour system manually, be sure to change it before recording. If you select the wrong video colour system for recording, the colour of the picture may be deteriorated.

## Hi-Fi Stereo Sound System

This unit will record and playback Hi-Fi stereo sound. In addition, it has an A2 and NICAM stereo sound decoder. This unit will receive stereo and bilingual broadcasts and it is possible to record in several ways and to play back the sound.

### Selecting the Audio Mode

You can select each mode by pressing **[AUDIO]** on the remote control. Each mode is indicated on the TV screen as following.

#### Audio mode during playback of the recorded tape in Hi-Fi mode:

Mode	Audio output	Display on the TV screen
Stereo	Stereo	STEREO
L	L audio from both speakers	LEFT
R	R audio from both speakers	RIGHT
Normal	Monaural	MONO

#### Audio mode during reception of bilingual broadcasts:

Mode	Audio output	Display on the TV screen
Main	Main audio from the both speakers	Main
Sub	Sub audio from the both speakers	Sub
Main / Sub	• Main audio from the left speaker • Sub audio from the right speaker	Main Sub


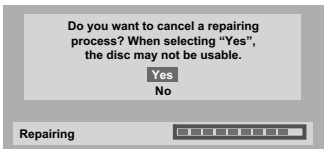

#### Note

- If you play back non-Hi-Fi tapes, the unit will play back automatically in monaural even if you select any mode.
- If the stereo signal becomes weak, the broadcast is automatically recorded in monaural.

## Troubleshooting

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

	Symptom	Remedy
POWER	The power does not turn on.	<ul style="list-style-type: none"> <li>Check that the AC power cord is connected securely.</li> <li>Batteries of the remote control are weak.</li> <li>Press <b>[TIMER SET]</b> to cancel the timer-standby mode. (When both DVD and VCR is in timer-standby mode, you cannot operate the unit.)</li> </ul>
	The unit turns on automatically without any operation.	<ul style="list-style-type: none"> <li>The unit turns on automatically 2 seconds before the timer recording.</li> </ul>
GENERAL	The unit does not function.	<ul style="list-style-type: none"> <li>"⊙" or error message appears if the operation is prohibited.</li> <li>Batteries of the remote control are weak or exhausted.</li> </ul>
	No picture, sound or menu appears on the screen.	<ul style="list-style-type: none"> <li>Check if the connections are made securely and correctly.</li> <li>Check if the cables are damaged.</li> <li>Check if a correct external input channel is selected on your TV.</li> </ul>
	"Clock" setting cannot be performed.	<ul style="list-style-type: none"> <li>If a recording is in progress, this operation cannot be performed.</li> </ul>
	The unit does not operate properly.	<ul style="list-style-type: none"> <li>Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about 2 hours until the moisture evaporates. (See page 3.)</li> </ul>
	The clock display does not appear on the front panel display.	<ul style="list-style-type: none"> <li>Check that the AC power cord is connected securely.</li> <li>(In case of power failure) Check the breaker and "Clock" setting.</li> <li>When the unit is in standby mode, front panel display is off because Power Saving mode is applied to this product.</li> </ul>
	When you forget the password for parental lock.	<ul style="list-style-type: none"> <li>Please cancel the password and the set level. (See page 57.)</li> </ul>
	DV signal cannot be input.	<ul style="list-style-type: none"> <li>Before connection, turn on the power supplies for both this unit and the DVC, and make sure that these units have stopped.</li> <li>Only a "DVC-SD" signal can be input from the DVC to this unit. Other types of signals are not supported.</li> <li>Do not connect any device other than the DVC. Even if a recorder or PC with another DV terminal is connected, the DV function will not operate.</li> <li>If the DVC is not recognised after connection, turn off the power supply for the unit and re-connect the DVC.</li> </ul>
	The DVC cannot be operated with this unit.	<ul style="list-style-type: none"> <li>Signal input or DVC operation from this unit may be disabled depending on the type of DVC.</li> <li>If a DVC signal cannot be input, use an external input (AV2) for analogue connection via audio/video cables. Use Scart adaptor for connecting to AV2.</li> <li>DVC control may be disabled depending on the type of DVC, even in a mode other than camera mode. In this case, switch to DVD control and execute the normal recording procedure while operating the DVC.</li> </ul>
	Certain functions of the DVC cannot operate.	<ul style="list-style-type: none"> <li>Some functions may not operate depending on the type of DVC. For example, if the DVC does not support slow playback mode, the slow playback function is disabled.</li> <li>With DV (AV3), the disc display menu does not appear unless disc playback is executed.</li> </ul>
	DV audio signal cannot be switched.	<ul style="list-style-type: none"> <li>For recording with the DVC, the recording audio signal can be set to 12 bits or 16 bits. However, when 16-bit recording mode is selected, audio signal cannot be switched. To record an audio signal, set it to 12 bits.</li> </ul>
GENERAL	No image from HDMI connection.	<ul style="list-style-type: none"> <li>Check the HDMI connection. (Check the status of the HDMI related indications.)</li> <li>Check whether the connected monitor device or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.)</li> <li>Check the setting of HDMI.</li> <li>Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.</li> <li>If the unit is connected to the unauthorised display device with an HDMI cable, the audio and video signals may not be output when playing back a commercial DVD-video.</li> </ul>

Symptom		Remedy
RECORDING	GENERAL The image from the external device cannot be displayed.	<ul style="list-style-type: none"> <li>• Try pressing <b>[AUX ▲ / ▼]</b> repeatedly to select your desired channel.</li> <li>• Turn on all connected devices.</li> <li>• Check if the connections are made securely and correctly.</li> </ul>
	Recording is impossible.	<ul style="list-style-type: none"> <li>• This unit cannot record programmes that contain copy protection signal. This is not a malfunction.</li> <li>• The space of the recording media may be used up. Try deleting unnecessary titles, or exchange it with the recordable media.</li> <li>• The maximum number of titles or chapters has exceeded. Delete the unnecessary titles to make enough space or insert a new recordable media.</li> <li>• Check if the disc is CPRM compatible. Copy-once programmes can only be copied onto the disc which is CPRM compatible.</li> <li>• Check if the disc is protected or finalised. Undo the protection or the finalisation.</li> <li>• Video mode DVD-RW once formatted in other unit cannot be recorded in this unit unless formatted in this unit.</li> <li>• Check if the connections are made securely and correctly.</li> </ul>
	Timer recording cannot be performed.	<ul style="list-style-type: none"> <li>• The internal clock of the unit may have been stopped due to a power failure that lasted for more than 30 seconds. Reset the clock. (See page 61.)</li> </ul>
	DVD “Repairing” appears on the TV screen. 	<ul style="list-style-type: none"> <li>• If there is a power failure or unplugging during recording, finalising, formatting or editing (even after “Repairing” disappears), a repairing process will begin automatically just after turning the unit on again.</li> <li>• It may take several minutes up to about several hours.</li> </ul>
	In a case you intend to cancel the repairing process. 	<ul style="list-style-type: none"> <li>• If you intend to cancel the repairing process, press <b>[OPEN/CLOSE ▲]</b> on the front panel, then select “Yes” and press <b>[ENTER]</b>. After that, press <b>[OPEN/CLOSE EJECT ▲]</b> to take out the disc. The disc cancelled during the repairing process MAY NOT work.</li> </ul>
VCR	The indication  does not disappear.	<ul style="list-style-type: none"> <li>• “Writing to Disc [Progress Bar] 100%” may remain on screen for the maximum of 20 seconds even after it reached 100%. This is not a malfunction.</li> </ul>
	Recording does not start immediately after pressing <b>[REC]</b> .	<ul style="list-style-type: none"> <li>• Make sure the videotape has a recorded tab when you record to a videotape. If needed, cover the hole with cellophane tape.</li> </ul>

		Symptom	Remedy
GENERAL		TV aspect ratio does not match your TV screen.	<ul style="list-style-type: none"> <li>• Check "TV Aspect" setting. (See page 60.)</li> <li>• A different aspect ratio will be used when the aspect ratio specified by the disc is not supported by this unit.</li> </ul>
		Playback picture is distorted. Colour of the picture is abnormal.	<ul style="list-style-type: none"> <li>• During fast forward or fast reverse, playback picture may be distorted. This is not a malfunction.</li> <li>• Connect to TV directly. When you connect this unit with the television via VCR or other devices, the picture may be distorted due to the copy-protection signal.</li> <li>• Check if the cables are damaged.</li> <li>• Keep the equipment which may cause electrical disturbances, such as a cellular phone, away.</li> </ul>
		There is no sound, or no subtitle.	<ul style="list-style-type: none"> <li>• Turn on all connected devices.</li> <li>• Check if the external input channel is set correctly.</li> <li>• Check if the connections are made securely and correctly.</li> <li>• If using the HDMI connection, sound is not output when "HDMI Audio" is set to "OFF".</li> <li>• Check the RCA audio cable connection. If you are using HDMI-DVI conversion cable, you must connect the RCA audio cable, too.</li> <li>• If using the HDMI connection, check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.</li> </ul>
PLAYBACK		Playback does not start from the beginning.	<ul style="list-style-type: none"> <li>• Resume function may be activated. Refer to page 40 to cancel the resume point.</li> </ul>
		Playback cannot be performed.	<ul style="list-style-type: none"> <li>• Check if the playable disc is inserted.</li> <li>• Check if the disc is loaded correctly with the labelled side facing up.</li> <li>• Discs made on other devices or on personal computers cannot be played back on this unit unless it is finalised on the device.</li> <li>• Even if it is finalised, the performance of those discs are not guaranteed on this unit.</li> <li>• The disc may be dirty or flawed. Clean the disc.</li> <li>• Check if all the connections are made correctly.</li> <li>• Check "Parental Lock" setting. (See page 57.)</li> <li>• Playback of DVD is prohibited from 2 minutes before the programmed start time of a timer recording when the recording media is DVD.</li> </ul>
		There is no sound, or no subtitle.	<ul style="list-style-type: none"> <li>• Check if all the connections are made correctly.</li> <li>• Check if the "Audio Out" is set correctly. (See pages 57-58.)</li> <li>• There is a possibility that the selected subtitle language is not supported by the disc.</li> </ul>
	DVD	Digital audio setting cannot be changed to main audio (L), sub audio (R) or combination of both.	<ul style="list-style-type: none"> <li>• If the audio source is in the Dolby Digital format, set "Dolby Digital" setting to "PCM" in "Playback" menu. (available only for DVD) (See page 58.)</li> </ul>
		Audio language or the subtitle language of the DVD cannot be changed.	<ul style="list-style-type: none"> <li>• Multilingual subtitles are not supported by the disc.</li> <li>• Some audio languages or the subtitle languages can be changed only from the disc menu. Please refer to the disc's manual.</li> </ul>
		Angles cannot be changed.	<ul style="list-style-type: none"> <li>• Even though the multi-angle feature is supported by the disc, that does not mean all the scenes are shot from multi-angles. Changing angles is available only for those scenes shot from the multi-angle.</li> </ul>
		The disc cannot be played back on other player even though it is finalised properly.	<ul style="list-style-type: none"> <li>• Some DVD players do not play back the disc made on other recorder. Refer to the manual of the unit.</li> </ul>
		Picture noise appears.	<ul style="list-style-type: none"> <li>• Adjust tracking control for better picture by pressing [AUX ^ / ∨] while you are playing back a videotape.</li> <li>• Head cleaning for VCR may be necessary. Refer to "AUTO HEAD CLEANING" on page 4.</li> </ul>
	VCR	The unit does not play back the videotape.	<ul style="list-style-type: none"> <li>• Check if a videotape is in this unit.</li> </ul>
		The motor rotates even when playback / recording is stopped.	<ul style="list-style-type: none"> <li>• The motor may rotate for the duration of approximately 5 minutes for efficient operation. This is not a malfunction.</li> </ul>

Symptom		Remedy
EDITING DVD	Titles cannot be edited or deleted.	<ul style="list-style-type: none"> <li>The titles or the disc itself may be protected. Cancel the protection by following the steps on page 50 for title protection and page 33 for disc protection.</li> </ul>
	Dubbing cannot be executed.	<ul style="list-style-type: none"> <li>When the number of the titles or the chapters exceeds the maximum recordable number, the dubbing will not be executed.</li> </ul>
	Titles cannot be edited or deleted.	<ul style="list-style-type: none"> <li>The titles in the DVD-R cannot be edited or deleted if they are finalised. If it is DVD-RW, undo the finalisation by following the steps on page 33.</li> </ul>
	The capacity of the disc doesn't increase even if the recorded programme is deleted.	<ul style="list-style-type: none"> <li>With video mode DVD-RW, the disc space will increase only when the last title is deleted. With DVD-R, deleting a title will not increase the disc space.</li> </ul>
	Dubbing cannot be executed.	<ul style="list-style-type: none"> <li>Check if the disc is compatible for recording. (See page 21.)</li> </ul>
REMOTE CONTROL	The remote control does not function.	<ul style="list-style-type: none"> <li>No batteries in the remote control or the batteries may be weak. Replace the batteries.</li> <li>Make sure there is no obstacle between the remote control and the unit.</li> <li>Try getting closer to the unit. (See page 12.)</li> <li>If above solutions do not solve the problem, please call an Authorised Service Centre.</li> </ul>

## Troubleshooting for Error Messages

Error message	Cause	Solution
Disc Error — Please eject the disc. — Playback feature may not be available on this disc.	<ul style="list-style-type: none"> <li>An unplayable disc is inserted in the unit.</li> <li>The disc is upside down.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a standard disc. (See pages 8-9.)</li> <li>Insert the disc with the labelled side facing up.</li> </ul>
Unknown USB Device/File — Please Remove the USB. — Insert a compatible USB device.	<ul style="list-style-type: none"> <li>Format of the files in the connected USB device are not supported.</li> <li>Incompatible USB device is connected.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a compatible USB device with supported file format. If this does not solve the problem, use other type of compatible USB device.</li> </ul>
Region Error — Please eject the disc. — Playback is not authorized in your region.	<ul style="list-style-type: none"> <li>Playback is not authorised in the region of the DVD-video that you inserted in the unit.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a DVD-video with region codes 2 or ALL.</li> </ul>
Parental Lock On The current selected parental level prohibits playback.	<ul style="list-style-type: none"> <li>The current selected parental level in "Setup" menu prohibits playback.</li> </ul>	<ul style="list-style-type: none"> <li>Check the "Parental Lock" setting. (See page 57.)</li> </ul>
Recording Error This programme is not allowed to be recorded.	<ul style="list-style-type: none"> <li>The recording function encountered a copy prohibited programme.</li> <li>Original source is in NTSC system.</li> </ul>	<ul style="list-style-type: none"> <li>You cannot record copy prohibited programmes.</li> </ul>
Recording Error This programme is not recordable in Video mode.	<ul style="list-style-type: none"> <li>You are trying to record a copy-once programme onto a DVD-RW disc in video mode.</li> </ul>	<ul style="list-style-type: none"> <li>Set "Format Mode" to "VR mode". (See page 23.)</li> </ul>
Recording Error Can not record on this disc.	<ul style="list-style-type: none"> <li>You are trying to record onto a disc that is unrecordable, or the disc status does not satisfy recording requirements.</li> <li>The disc is dirty.</li> <li>The disc is damaged.</li> <li>You are trying to record onto a VR mode DVD-RW disc which contained recordings from another recorder.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a recordable disc, and ensure the disc status satisfies the recording requirements. (See page 21.)</li> <li>Clean the disc with a cleaning cloth.</li> <li>Replace the disc.</li> <li>Disc may need formatting.</li> </ul>
Recording Error Cannot record. Disc not CPRM comp.	<ul style="list-style-type: none"> <li>You are trying to record a copy-once programme onto a DVD disc that is not compatible with CPRM.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a ver. 1.1 or ver. 1.2 DVD-RW disc. (Compatible with CPRM.)</li> </ul>
Recording Error This disc is protected and not recordable.	<ul style="list-style-type: none"> <li>You are trying to record onto the VR mode DVD-RW disc that is set as protected in "Setup" Menu.</li> </ul>	<ul style="list-style-type: none"> <li>Remove the disc protect setting in "DVD Menu" menu. (See page 33.)</li> </ul>
Recording Error Disc is full. (No area for new recording)	<ul style="list-style-type: none"> <li>You are trying to record onto the VR mode DVD-RW disc that has no space for recording.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a recordable disc with enough recording space.</li> <li>Delete unnecessary original titles. (See page 48.)</li> </ul>



Error message	Cause	Solution
Recording Error You cannot record more than 99 titles on one disc. (The maximum is 99)	<ul style="list-style-type: none"> <li>You are trying to record onto the DVD-RW / -R disc on which the number of recorded titles has reached the maximum (99).</li> </ul>	<ul style="list-style-type: none"> <li>Delete unnecessary original titles. (See page 48.)</li> </ul>
Recording Error You cannot record more than 999 chapters on one disc. (The maximum is 999)	<ul style="list-style-type: none"> <li>You are trying to record onto the VR mode DVD-RW disc on which the number of recorded chapters has reached the maximum (999).</li> </ul>	<ul style="list-style-type: none"> <li>Delete unnecessary chapter mark from an Original list. (See page 49.)</li> </ul>
Recording Error You cannot record on this disc as Control Information is full.	<ul style="list-style-type: none"> <li>This disc has no space to write Control Information when recording or deleting contents.</li> <li>When editing has been repeatedly performed, the control information area may become full even though the recording area has enough space.</li> </ul>	<ul style="list-style-type: none"> <li>Delete unnecessary original titles. (See page 48.)</li> </ul>
Recording Error You cannot record on this disc as Power Calibration Area is full.	<ul style="list-style-type: none"> <li>When recordings are performed repeatedly onto an unstable disc, this area may become full.</li> <li>Every time you insert a disc for recording, part of the disc's working area will be used. If you repeat this frequently, it will be used up quicker and you may not be able to record maximum number of titles for the disc.</li> </ul>	<ul style="list-style-type: none"> <li>Insert a new disc.</li> </ul>
Recording Error This disc is already finalised.	<ul style="list-style-type: none"> <li>You are trying to record onto a disc that is already finalised.</li> </ul>	<ul style="list-style-type: none"> <li>Release the finalising for the disc. (See page 33.)</li> </ul>

\* If you are still having trouble with the unit after checking all the Troubleshooting points, write down the error code and the error description and consult your dealer.

## Language Code

Language	Code	Language	Code	Language	Code	Language	Code
Abkhazian	4748	French	5264	Lithuanian	5866	Sindhi	6550
Afar	4747	Frisian	5271	Macedonian	5957	Singhalese	6555
Afrikaans	4752	Galician	5358	Malagasy	5953	Siswat	6565
Albanian	6563	Georgian	5747	Malay	5965	Slovak	6557
Amharic	4759	German	5051	Malayalam	5958	Slovenian	6558
Arabic	4764	Greek	5158	Maltese	5966	Somali	6561
Armenian	5471	Greenlandic	5758	Maori	5955	Spanish	5165
Assamese	4765	Guarani	5360	Marathi	5964	Sundanese	6567
Aymara	4771	Gujarati	5367	Moldavian	5961	Swahili	6569
Azerbaijani	4772	Hausa	5447	Mongolian	5960	Swedish	6568
Bashkir	4847	Hebrew	5569	Nauru	6047	Tagalog	6658
Basque	5167	Hindi	5455	Nepali	6051	Tajik	6653
Bengali; Bangla	4860	Hungarian	5467	Norwegian	6061	Tamil	6647
Bhutani	5072	Icelandic	5565	Occitan	6149	Tatar	6666
Bihari	4854	Indonesian	5560	Oriya	6164	Telugu	6651
Bislama	4855	Interlingua	5547	Oromo (Afan)	6159	Thai	6654
Breton	4864	Interlingue	5551	Panjabi	6247	Tibetan	4861
Bulgarian	4853	Inupiak	5557	Pashto; Pushto	6265	Tigrinya	6655
Burmese	5971	Irish	5347	Persian	5247	Tonga	6661
Byelorussian	4851	Italian	5566	Polish	6258	Tsonga	6665
Cambodian	5759	Japanese	5647	Portuguese	6266	Turkish	6664
Catalan	4947	Javanese	5669	Quechua	6367	Turkmen	6657
Chinese	7254	Kannada	5760	Rhaeto-Romance	6459	Twi	6669
Corsican	4961	Kashmiri	5765	Romanian	6461	Ukrainian	6757
Croatian	5464	Kazakh	5757	Russian	6467	Urdu	6764
Czech	4965	Kinyarwanda	6469	Samoan	6559	Uzbek	6772
Danish	5047	Kirghiz	5771	Sangho	6553	Vietnamese	6855
Dutch	6058	Kirundi	6460	Sanskrit	6547	Volapuk	6861
English	5160	Korean	5761	Scots Gaelic	5350	Welsh	4971
Esperanto	5161	Kurdish	5767	Serbian	6564	Wolof	6961
Estonian	5166	Laothian	5861	Serbo-Croatian	6554	Xhosa	7054
Faroese	5261	Latin	5847	Sesotho	6566	Yiddish	5655
Fiji	5256	Latvian; Lettish	5868	Setswana	6660	Yoruba	7161
Finnish	5255	Lingala	5860	Shona	6560	Zulu	7267

# Specifications

## General

VCR video heads	Four heads
Power requirements	220–240 V $\sim$ $\pm$ 10 %, 50 Hz $\pm$ 0.5 %
Power consumption	35 W
Power consumption (standby)	0.5 W
Weight	5.0 kg
Dimensions (width x height x depth)	435 x 99.5 x 388 mm
Operating temperature	5°C to 40°C
Operating humidity	Less than 80 % (no condensation)

## Recording

Recording format	Video Recording (VR) format (DVD-RW only), video format (DVD-RW, DVD-R)
Recordable discs	DVD-ReWritable, DVD-Recordable
<b>Video recording format</b>	
Sampling frequency	13.5 MHz
Compression format	MPEG
<b>Audio recording format</b>	
Sampling frequency	48 kHz
Compression format	Dolby Digital

## Input/Output

### Front Panel :

DV input DV 4-pin jack	IEEE 1394
USB input TYPE A	USB 2.0 Bus power current: MAX. 500 mA

### Rear Panel :

Audio input/output Input/output level	Two 21-pin scart sockets (AV1, AV2) 2 Vrms (input impedance: more than 10 k $\Omega$ / output impedance: less than 1 k $\Omega$ )
Video input/output Input/output level	Two 21-pin scart sockets (AV1, AV2) 1 Vp-p (75 $\Omega$ ) each
Component video output Output level	Three RCA connectors Y: 1.0 Vp-p (75 $\Omega$ ) P <sub>B</sub> /C <sub>B</sub> , P <sub>R</sub> /C <sub>R</sub> : 0.7 Vp-p (75 $\Omega$ ) each
Audio output Output level	Two RCA connectors 2 Vrms (output impedance: 680 $\Omega$ )
Digital audio output Output level	One Coaxial pin jack 500 mVp-p (75 $\Omega$ )
HDMI output	HDMI jack

## Note

The specifications and design of this product are subject to change without notice.

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## Declaration of Conformity

This product complies with the requirement of the related directives.

We: FUNAI ELECTRIC EUROPE Sp. z o.o.  
17 Stycznia 45 B 02-146 Warszawa, Poland

declare that the following product:  
DVD / Video Cassette recorder  
Model WL6D-M102  
Trade Name: Funai  
is in compliance with the related regulations.

